

AREA 317 RCRA QUARTERLY  
GROUND WATER MONITORING REPORT NO. 27  
APRIL THROUGH JUNE 1995

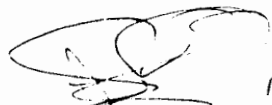
WHITTAKER CORPORATION, BERMITE FACILITY  
22116 WEST SOLEDAD CANYON ROAD  
SANTA CLARITA, CALIFORNIA 91350  
AME PROJECT NO. 21001.53

September 19, 1995

Prepared By

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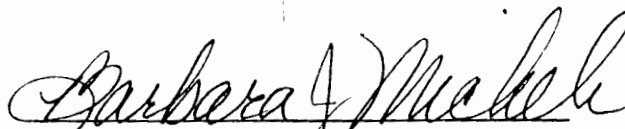
PREPARED BY:

 For

Rod C. Goss  
Engineer

Date 9/13/95

REVIEWED BY:



Barbara J. Mickelson, P.E.  
California Registered Professional  
Engineer #43417

Date 9/19/95

**ACTON •  
MICKELSON •  
ENVIRONMENTAL, INC.**

**Consulting Scientists, Engineers, and Geologists**

September 19, 1995

Mr. Hamid Saebfar, Chief  
Site Mitigation Branch, Region 3  
Attn: Whittaker Project Manager  
Department of Toxic Substances Control  
1011 North Grandview Avenue  
Glendale, California 91201

21001.53/1

Subject: Area 317 RCRA Quarterly Ground Water Monitoring Report No. 27,  
April through June 1995, Whittaker Corporation, Bermite Facility  
22116 West Soledad Canyon Road, Santa Clarita, California 91350

Dear Mr. Saebfar:

Enclosed is the Area 317 RCRA Quarterly Ground Water Monitoring Report for the second quarter, April through June 1995. The monitoring was completed according to the requirements of the Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment.

The statistical analyses for this sampling event showed that the established tolerance limits for pH, specific conductance, chloride, sulfate, TCE, TOC, or TOX were not exceeded. The tolerance limit for sodium was exceeded for the sample from monitoring well MW-10.

Please call if there are any questions regarding the enclosed report.

Sincerely,

**ACTON • MICKELSON • ENVIRONMENTAL, INC.**



Barbara J. Mickelson, P.E.  
California Registered Professional Engineer #43417

BJM:mjd  
Enclosure

cc/enc: Mr. Richard B. Levin, Esq., Whittaker Corporation  
Mr. Glen AbdunNur, Bermite Facility  
Mr. Robert P. Ghirelli, Los Angeles Regional Water Quality Control Board  
Mr. Jose Ochoa, Los Angeles County Fire Department  
Ms. Mary Blevins, U.S. Environmental Protection Agency, Region IX

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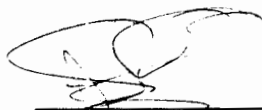
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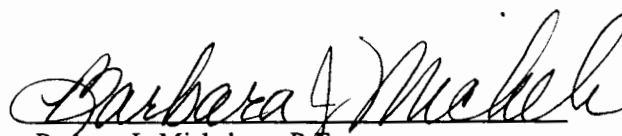
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**AREA 317 RCRA QUARTERLY  
GROUND WATER MONITORING REPORT NO. 27  
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**WHITTAKER CORPORATION, BERMITE FACILITY  
22116 WEST SOLEDAD CANYON ROAD  
SANTA CLARITA, CALIFORNIA 91350**

## **1.0 INTRODUCTION**

The Whittaker Corporation (Whittaker), Bermite facility (site) is located at 22116 West Soledad Canyon Road in Santa Clarita, California (Figure 1). Whittaker had interim status permits for 14 Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Units (HWMUs) when operations were terminated in April 1987. A document entitled "Whittaker Corporation, Bermite Division, Santa Clarita, California, CAD064573108, Facility Closure Plan Modifications" (Closure Plan), was prepared by Whittaker and approved by the California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA) and U.S. Environmental Protection Agency (EPA) on December 28, 1987. The Closure Plan outlined procedures for obtaining approval by Cal-EPA and EPA of clean closure certification for the different HWMUs, including the 317 Surface Impoundment (Area 317).

The Closure Plan required the implementation of a ground water monitoring system at Area 317 capable of detecting and assessing the impact of the HWMU on the uppermost aquifer underlying Area 317. Implementation of a ground water monitoring system is described in the document entitled "Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment," dated October 9, 1992 (Area 317 Monitoring Plan). This is a revised response plan approved by Cal-EPA which meets the requirements of the revisions to Title 22 and expands the constituents sampled and reported. The revised Area 317 Monitoring Plan was utilized for the nineteenth and subsequent sampling events.

A total of six ground water monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, and MW-10) have been installed around Area 317 (Figure 2). Reports detailing the location and construction of monitoring wells, sampling and analysis plans for collecting and analyzing ground water samples from the ground water monitoring wells, abandonment of monitoring well MW-4, and quarterly sampling results which have been submitted to Cal-EPA and EPA are listed in Appendix A.

Quarterly ground water sampling activities were initiated on October 3, 1988, for monitoring wells MW-1, MW-3, and MW-4. The ground water monitoring program included analyses of water samples for volatile organic compounds (VOCs). Laboratory analytical results from the third quarterly sampling event reported trichloroethene (TCE) at 4,800 micrograms per liter ( $\mu\text{g/l}$ ) in the ground water sample collected from monitoring well MW-4. As a result, two additional monitoring wells were installed in Area 317 (MW-5 and MW-6).

The fourth quarterly monitoring event included sampling of the ground water from monitoring wells MW-1, MW-3, and MW-4. Monitoring wells MW-5 and MW-6 were not equipped for sampling during the fourth quarterly sampling event. Analytical results from the fourth quarter were similar to those reported in the third quarterly sampling event. The concentrations of VOCs reported in samples collected from monitoring wells MW-1 and MW-3 were below laboratory reporting limits; however, analysis of the ground water sample collected from monitoring well MW-4 reported TCE at 7,200  $\mu\text{g/l}$ . Analysis of ground water samples collected from monitoring well MW-4 during the fifth through twelfth quarterly sampling events reported a steady decline in TCE concentration. Based on the results of the initial four sampling events, a reduced list of chemical parameters, approved by Cal-EPA, was utilized for the fifth through eighteenth quarterly sampling events.

Statistical analysis of indicator parameters was initiated during the fifth quarterly sampling event. The ground water samples collected and analyzed for indicator parameters from monitoring wells MW-1, MW-3, and MW-4 for the initial year of monitoring were evaluated to assess whether statistically significant changes to the ground water had occurred as a result of site activities.

A Comprehensive Ground Water Monitoring Evaluation (CME) was conducted by Cal-EPA on January 24 and 25, 1990, during the sixth quarterly monitoring event. Personnel from Cal-EPA were present during all phases of the sixth quarterly monitoring event, from the taking of initial potentiometric surface elevation measurements to the sealing of the coolers containing the quarterly ground water samples.

Ground water samples from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10 were collected on June 27, 1995. The results of the twenty-seventh quarterly ground water sampling event are presented in this report, along with recommendations for future quarterly ground water sampling events.

## 2.0 GROUND WATER LEVEL MEASUREMENTS

Water level measurements were collected on June 26, 1995, prior to well evacuation and sampling activities. Monitoring well locations with respect to Area 317 are shown on Figure 2. Water levels were measured to the nearest 0.01 foot. Water level elevations have decreased 47.08, 46.54, 32.67, and 33.28 feet in monitoring wells MW-1, MW-3, MW-5, and MW-6, respectively, since the initiation of RCRA ground water monitoring activities at Area 317. The water level elevation has increased 10.25 feet in monitoring well MW-10 since installation. Water level elevations increased 1.19, 1.52, 0.55, 0.59, and 0.93 feet in monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, between the twenty-sixth and

twenty-seventh quarters. Table 1 summarizes potentiometric surface elevation data for monitoring wells in Area 317. Figure 3 graphically illustrates the changes in potentiometric surface elevations in monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10 over time.

The June 26, 1995, water level measurements were utilized to develop the potentiometric surface contours illustrated on Figure 2. Figure 2 indicates the inferred flow direction for June 26, 1995, is toward the north-northeast. Based on this data, monitoring wells MW-6 and MW-10 are estimated to be located hydraulically downgradient from Area 317, monitoring well MW-5 is estimated to be located hydraulically crossgradient from Area 317, monitoring well MW-1 is estimated to be located hydraulically crossgradient and/or upgradient from Area 317, and monitoring well MW-3 is estimated to be located hydraulically upgradient from Area 317. The ground water flow direction estimated for June 26, 1995, is similar to the flow direction estimated for the previous sampling event. The estimated ground water flow direction has varied from north-northwest to north-northeast since initiating quarterly ground water monitoring, possibly representing a contributory factor to the reported variability in ground water chemistry.

### **3.0 SAMPLE COLLECTION AND ANALYSES**

Ground water evacuation, stabilization, and sampling procedures are outlined in Appendix B.

#### **3.1 Required Ground Water Analyses**

For the twenty-seventh sampling event, the following analytical parameters were tested according to the Area 317 Monitoring Plan:

- Ground Water Monitoring Parameters: pH, specific conductance, TOC, TOX, TCE, sulfate, sodium, manganese, iron, and chloride.

Background water quality parameters were not analyzed in the twenty-seventh sampling event based on the results from previous sampling events.

All ground water samples collected during the twenty-seventh sampling event were submitted to FGL Environmental (FGL) in Santa Paula, California. FGL is certified by Cal-EPA to perform the ground water analyses outlined in the Closure Plan. Chain-of-custody and sample analyses request forms are included in Appendices C and D, respectively.

A description of FGL's Quality Assurance/Quality Control (QA/QC) program is provided in Appendix E. Copies of the laboratory analytical reports for all trip, field, and method blanks, and duplicate and spiked samples analyzed by FGL are provided in Appendix F.



### 3.2 Approved Analytical Methods

Ground water monitoring parameters were analyzed by EPA or other approved methodologies. Analytical methodologies were presented in the "Ground Water Sampling and Analysis Plan," dated August 1988. Modifications to this plan were approved by Cal-EPA prior to the fifth quarterly sampling event. Copies of the laboratory test method protocol were included in Appendix B of "Quarterly Sampling Report No. 1," dated December 1988.

A summary of sample volumes, sample containers, and laboratory analytical methods utilized during the twenty-seventh sampling event is presented in Table B-3, Appendix B. Procedures regarding sample containers, sample labeling, sample collection, and field QA/QC are outlined in Appendix B.

## 4.0 GROUND WATER SAMPLE ANALYTICAL RESULTS

### 4.1 Ground Water Monitoring Parameters

Ground water samples from each monitoring well were analyzed for pH, specific conductance, chloride, iron, manganese, sodium, sulfate, TCE, TOC, and TOX to serve as ground water monitoring parameters. Table 2 summarizes the results of the ground water monitoring parameter analyses. Copies of the original laboratory data sheets are presented in Appendix G.

Laboratory pH measurements of 7.4, 7.6, 7.7, 7.7, and 7.8 were recorded for samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-seventh monitoring event. The laboratory pH measurements recorded for samples collected from the monitoring wells during the twenty-seventh sampling event were generally consistent with the measurements recorded during previous sampling events.

Specific conductance measurements of 760, 620, 540, 570, and 610 micromhos per centimeter squared ( $\mu\text{mhos}/\text{cm}^2$ ) were recorded for samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-seventh sampling event. The specific conductance measurements recorded during the twenty-seventh sampling event are generally consistent with measurements recorded during previous sampling events.

The results for chloride, sodium, and sulfate were 170, 45, and 13 milligrams per liter (mg/l) for the sample from monitoring well MW-1; 32, 53, and 76 mg/l for the sample from monitoring well MW-3; 47, 49, and 35 mg/l for the sample from monitoring well MW-5; 67, 45, and 34 mg/l for the sample from monitoring well MW-6; and 68, 76, and 41 mg/l for the sample from monitoring well MW-10. Laboratory results for iron were 50, <50, 80, 140, and

70  $\mu\text{g/l}$  for the ground water samples collected from monitoring wells MW-1, MW-3, MW-5, MW-6, and MW-10, respectively, for the twenty-seventh sampling event. The results for iron, sodium, chloride, and sulfate are generally consistent with results from previous sampling events.

The concentration of manganese in samples collected on June 27, 1995, ranged from 4.4  $\mu\text{g/l}$  in the sample collected from monitoring well MW-10 to 0.6  $\mu\text{g/l}$  in the sample collected from monitoring well MW-3. For reporting purposes, the detection limit for manganese for the present monitoring event is 0.5  $\mu\text{g/l}$ .

TCE was reported at less than the 0.5  $\mu\text{g/l}$  detection limit in samples from all five monitoring wells. These results for TCE from ground water samples from Area 317 monitoring wells are consistent with the previous sampling event.

TOC was reported at less than the 0.5 mg/l detection limit in all samples collected from Area 317 monitoring wells during the twenty-seventh sampling event. The TOC measurements recorded during the twenty-seventh sampling event are generally consistent with measurements recorded during previous sampling events.

The concentration of TOX samples collected on June 27, 1995 ranged from less than the 5  $\mu\text{g/l}$  detection limit in the sample collected from monitoring well MW-5 to 10  $\mu\text{g/l}$  in the samples collected from wells MW-1, MW-6, and MW-10. The TOX measurements recorded during the twenty-seventh sampling event are generally consistent with measurements recorded during previous sampling events.

Copies of the laboratory analytical reports for the ground water monitoring parameters are included in Appendix G.

#### **4.2 Background Water Quality Parameters**

Background water quality parameters were not tested during the present monitoring event. The background water quality parameters were last tested during the twenty-third monitoring event because of a third consecutive exceedance with respect to the tolerance limit established for sodium. A summary of historical background water quality parameters is presented in Table 3.

#### **5.0 STATISTICAL ANALYSIS OF RESULTS TO DATE**

As was indicated in the document entitled "Ground Water Sampling and Analysis Plan," dated August 1988, and required in 40 CFR Part 265.92, statistical analysis of the indicator parameters was previously performed to determine whether a statistically significant difference in the water

quality existed between the individual downgradient monitoring wells and the upgradient or background monitoring wells. At that time, monitoring wells MW-1 and MW-3 were considered upgradient or crossgradient relative to Area 317, and monitoring wells MW-5, MW-6, and MW-10 were considered downgradient or crossgradient relative to Area 317.

After four quarters of sampling and analysis of the monitoring system, the mean, standard deviation, variance, and coefficient of variance of the four indicator parameters were calculated. These values were reported to Cal-EPA in correspondence to Mr. Alan Sorsher, P.E., Cal-EPA, from Wenck Associates Inc. (Wenck), dated October 25, 1989. The statistical analysis, presented in the fifth through tenth quarterly sampling reports, indicated only one statistically significant difference in water quality as determined by the indicator parameters. This was interpreted by Wenck to be caused by erroneous TOC results from the sixth quarter.

Since the approval of the Area 317 Monitoring Plan by Cal-EPA, the statistical comparison of analytical results for each downgradient monitoring well is made against the tolerance limits calculated from upgradient monitoring well results for the ten ground water monitoring parameters (chloride, sulfate, iron, manganese, sodium, TCE, TOC, TOX, specific conductance, and pH). The tolerance limits for the ground water monitoring parameters will be updated at a minimum annually to include the latest analytical data.

Concentrations of the ground water monitoring parameters in the ground water samples collected from Area 317 monitoring wells for the twenty-seventh quarter are included in Table H-1, presented in Appendix H. A summary of the quarterly statistics for each background monitoring well and the tolerance limit calculations for the ground water monitoring parameters are presented in Appendix H, Tables H-2, H-3, and H-4. Graphical presentation of the statistical information is also included in Appendix H.

### **5.1 Assumptions Used in the Statistical Analysis**

As recommended in the document entitled "RCRA Ground Water Monitoring Technical Enforcement Guidance Document," the data points that are less than the detection limit have been given a value equal to one-half the detection limit of the analyte. As recommended in the document entitled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities, Interim Final Guidance" (Guidance Document), the statistical analysis assumes a value for the confidence coefficient (1- $\alpha$ ) of 0.95 and a value for the proportion ( $y$ ) of 0.95. This translates to a 95 percent confidence that 95 percent of future background monitoring well results will fall within the tolerance interval predicted. The tolerance limits for pH were calculated using a two-tailed distribution, and the tolerance limits for the other parameters were calculated using a one-tailed distribution. It was assumed that the data are distributed normally.

## 5.2 Data Preparation

The ground water sample analytical results from the two background or upgradient monitoring wells (MW-1 and MW-3) for all twenty-seven quarters of ground water sampling to date and the three downgradient monitoring wells (MW-5, MW-6, and MW-10) for the twenty-seventh quarter of ground water sampling have been tabulated and prepared for statistical analysis. In accordance with the tolerance limit methodology used for this statistical analysis, the analytical results for the ten ground water monitoring parameters are summarized by quarter and by monitoring well. Arithmetic mean and standard deviation summary statistics have been calculated from background monitoring well results and are utilized in calculating the tolerance limits for each of the ground water monitoring parameters.

The statistical analysis for the ground water monitoring parameters involves testing the ground water quality downgradient of Area 317 against the set of tolerance limits, i.e., that there are no excursions of the tolerance limits, which are based on the average of all the quarterly statistics for each of the ten ground water monitoring parameters for background monitoring wells MW-1 and MW-3, compared to the twenty-seventh quarter results for each of the downgradient monitoring wells MW-5, MW-6, and MW-10 (Table H-1).

The calculations of the quarterly statistics were performed in the same manner as was outlined in the Area 317 Monitoring Plan. The values of K were taken from the statistical tables based on the number of samples and a one-sided tolerance limit. Note that pH values have not been reported as hydrogen ion concentrations as was done previously and that the value of K for the analysis of pH is derived from the tables for two-sided tolerance limits. TCE has never been reported above the detection limit in samples from monitoring wells MW-1 and MW-3; therefore, the tolerance limit for TCE is set at the detection limit.

## 5.3 Results

The twenty-seventh quarter results for each ground water monitoring parameter at each downgradient monitoring well were compared to the tolerance limits based on the first through twenty-seventh quarter results for background monitoring wells MW-1 and MW-3. The statistical analysis indicates that there is no excursion of tolerance limits of pH, specific conductance, chloride, sulfate, iron, manganese, sodium, TCE, TOC, or TOX in downgradient ground water quality, except for sodium in the sample from monitoring well MW-10. In the past, an elevated sodium concentration in monitoring well MW-10 relative to sodium concentrations in the other four Area 317 wells has not indicated a statistical impact to ground water quality, based on the concentrations of the other ground water monitoring parameters and retesting of background water quality parameters.

## **6.0 SUMMARY**

### **6.1 Ground Water Level Measurements**

Based on the June 26, 1995 data, the estimated direction of ground water flow is toward the north-northeast, which is consistent with the ground water flow direction estimated during the previous sampling event. Utilizing this data, monitoring wells MW-6 and MW-10 are estimated to be located hydraulically downgradient from Area 317; monitoring well MW-5 is estimated to be located hydraulically crossgradient from Area 317; monitoring well MW-1 is estimated to be located hydraulically crossgradient and/or upgradient from Area 317; and monitoring well MW-3 is estimated to be located hydraulically upgradient from Area 317.

### **6.2 Ground Water Monitoring Parameters**

The pH reported in samples from the five monitoring wells ranged from 7.4 (monitoring well MW-1) to 7.8 (monitoring well MW-10). The specific conductance in samples from the five monitoring wells ranged from 540  $\mu\text{mhos}/\text{cm}^2$  (monitoring well MW-5) to 760  $\mu\text{mhos}/\text{cm}^2$  (monitoring well MW-1). TOC was reported at less than 0.5 mg/l in samples from all five monitoring wells. TOX in samples from the five monitoring wells ranged from less than 5  $\mu\text{g}/\text{l}$  (monitoring well MW-5) to 10  $\mu\text{g}/\text{l}$  (monitoring wells MW-1, MW-6, and MW-10). The pH, specific conductance, TOC, and TOX results reported for the twenty-seventh sampling event are generally consistent with the results reported for the previous sampling events.

The constituent of concern for Area 317 is TCE, which was reported as less than the detection limit in samples from all five monitoring wells. This result is consistent with the previous sampling event.

The ground water sample analytical results for chloride, iron, manganese, sodium, and sulfates from the five monitoring wells are generally consistent with the existing data. All are under the tolerance limits, except for sodium in the sample from monitoring well MW-10.

### **6.3 Background Water Quality Parameters**

Background water quality parameters were not tested in this quarter. If tolerance limits for any water quality parameters are exceeded for three consecutive monitoring events, then additional samples will be collected during the subsequent monitoring event and analyzed for the background water quality parameters. The tolerance limit for sodium was exceeded for the fourth consecutive quarter in the sample from monitoring well MW-10. Acton • Mickelson • Environmental, Inc. (AME), proposes that no further background water quality parameters be tested due to this exceedance at this time. The elevated sodium concentrations in the sample

from monitoring well MW-10 relative to sodium concentrations in samples from the Area 317 background wells has not indicated an impact with respect to the other ground water quality parameter concentrations. During the twenty-third monitoring event, all six background parameters were analyzed due to the exceedance of the tolerance limit for sodium in the sample from monitoring well MW-10. Analysis of the data indicated that the concentrations of background water quality parameters were consistent with the historical data for these parameters in samples from upgradient wells MW-1 and MW-3.

#### **6.4 Statistical Analysis**

The analytical results from the twenty-seventh quarter sampling event indicate that values for pH, specific conductance, chloride, sulfate, iron, manganese, sodium (monitoring wells MW-5 and MW-6) TCE, TOC, and TOX in the crossgradient and downgradient monitoring wells, respectively, are within the tolerance limits set by calculations using historical results from the background monitoring wells. The only tolerance limit exceeded was sodium for the sample from monitoring well MW-10.

#### **7.0 RECOMMENDATIONS**

Based upon the data collected, current regulatory guidelines, and the professional judgment of AME, the following recommendations are presented:

- Conduct future sampling events in accordance with the procedures set forth in the document entitled "Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment," dated October 9, 1992.
- Update the tolerance limits for the ground water monitoring parameters following the twenty-eighth quarterly sampling event.

#### **8.0 REMARKS**

The recommendations contained in this report represent our professional opinions. These opinions are based on currently available information and were developed in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TABLE 1

POTENTIOMETRIC SURFACE ELEVATIONS  
RCRA GROUND WATER MONITORING WELLS  
WHITTAKER CORPORATION, BERMITE FACILITY

Well No.	MW-1	MW-3	MW-4	MW-5	MW-6	MW-10
Top of Casing Elevation*	1,561.32	1,538.51	1,538.43	1,493.37	1,521.09	1,537.49
Date	Potentiometric Surface Elevations*					
12/23/87	1,107.81	-- <sup>b</sup>				
01/27/88	1,108.03	1,109.51				
02/03/88	1,108.32	1,109.88				
02/04/88	1,108.36	1,109.14				
02/05/88	1,108.36	1,109.17				
02/09/88	1,108.24	1,109.13				
02/10/88	1,108.28	1,109.27				
02/12/88	1,108.28	1,109.27				
02/19/88	1,108.11	1,108.86				
03/28/88	1,107.69	1,108.23				
04/05/88	1,107.76	1,108.23				
04/12/88	1,107.66	1,108.23				
04/19/88	1,107.56	1,108.23				
04/26/88	1,107.61	1,108.23				
05/02/88	1,107.86	1,108.23				
07/27/88	1,103.58	1,104.19	1,102.61			
10/03/88	1,101.75	1,102.11	1,100.77			
01/23/89	1,099.82	1,100.25	1,098.92			
04/17/89	1,097.37	1,097.62	1,096.05			
07/27/89	1,094.67	1,094.85	1,093.53	1,093.02	1,093.15	
08/10/89	1,093.93	1,094.09	1,092.89	1,092.32	1,092.49	
08/18/89	1,093.62	1,093.76	1,092.64	1,092.03	1,092.19	
10/30/89	1,092.07	1,092.16	1,091.08	1,090.62	1,090.64	
01/24/90	1,090.56	1,090.54	1,089.68	1,089.17	1,089.50	
04/16/90	1,088.66	1,088.78	1,087.83	1,087.23	1,087.32	
07/16/90	1,083.56	1,083.53	1,082.29	1,081.41	1,081.85	
10/17/90	1,079.91	1,079.78	1,078.86	1,078.25	1,078.56	
01/28/91	1,076.52	1,076.54	1,075.46	1,074.64	1,074.91	
04/22/91	1,071.22	1,071.29	1,069.75	1,068.90	1,069.25	
07/17/91	1,063.63	1,063.79	1,061.66	1,060.53	1,061.14	
10/08/91	1,055.22	1,055.41	1,053.28	1,052.12	1,052.69	
01/29/92	1,051.88	1,052.29	1,050.63	1,049.76	1,050.06	1,050.57
04/20/92	1,050.47	1,050.88	1,049.33	1,048.78	1,048.92	1,049.37
07/28/92	1,046.84	1,047.40	-- <sup>c</sup>	1,045.14	1,045.20	1,045.77
10/19/92	1,043.87	1,044.58	-- <sup>c</sup>	1,042.05	1,042.13	1,042.77
01/25/93	1,044.79	1,045.61	-- <sup>c</sup>	1,044.22	1,043.64	1,044.29
06/07/93	1,049.24	1,050.36	-- <sup>c</sup>	1,049.19	1,048.70	1,049.21
09/20/93	1,052.40	1,054.11	-- <sup>c</sup>	1,052.47	1,051.79	1,052.53
12/06/93	1,054.26	1,056.27	-- <sup>c</sup>	1,054.29	1,053.58	1,054.53
03/07/94	1,057.58	1,059.63	-- <sup>c</sup>	1,057.69	1,056.92	1,057.77
06/21/94	1,056.22	1,058.38	-- <sup>c</sup>	1,055.41	1,054.93	1,055.86
09/13/94	1,053.94	1,056.25	-- <sup>c</sup>	1,052.79	1,052.44	1,053.43
12/12/94	1,054.62	1,056.79	-- <sup>c</sup>	1,054.00	1,053.55	1,054.50
03/27/95	1,059.54	1,061.45	-- <sup>c</sup>	1,059.80	1,059.28	1,059.89
06/26/95	1,060.73	1,062.97	-- <sup>c</sup>	1,060.35	1,059.87	1,060.82

\*NGVD = National Geodetic Vertical Datum.

<sup>b</sup>Measurement not recorded.

<sup>c</sup>Monitoring well abandoned 05/28/92.

TABLE 2  
GROUND WATER MONITORING PARAMETER ANALYSES  
FOR SAMPLES COLLECTED JUNE 27, 1995

Parameter	Units	Detection Limit	Monitoring Well No.				
			MW-1	MW-3	MW-5	MW-6	MW-10
pH			7.4	7.6	7.7	7.7	7.8
Specific Conductance	$\mu\text{mhos}/\text{cm}^2$	1	760	620	540	570	610
Chloride	mg/l	2	170	32	47	67	68
Iron	$\mu\text{g}/\text{l}$	50	50	<50	80	140	70
Manganese	$\mu\text{g}/\text{l}$	0.5	2.8	0.6	4.3	3.0	4.4
Sodium	mg/l	1	45	53	49	45	76
Sulfate	mg/l	2	13	76	35	34	41
TCE <sup>a</sup>	$\mu\text{g}/\text{l}$	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TOC <sup>b</sup>	mg/l	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TOX <sup>c</sup>	$\mu\text{g}/\text{l}$	5	10	7	<5	10	10

<sup>a</sup>TCE = Trichloroethene.

<sup>b</sup>TOC = Total Organic Carbon.

<sup>c</sup>TOX = Total Organic Halogens.



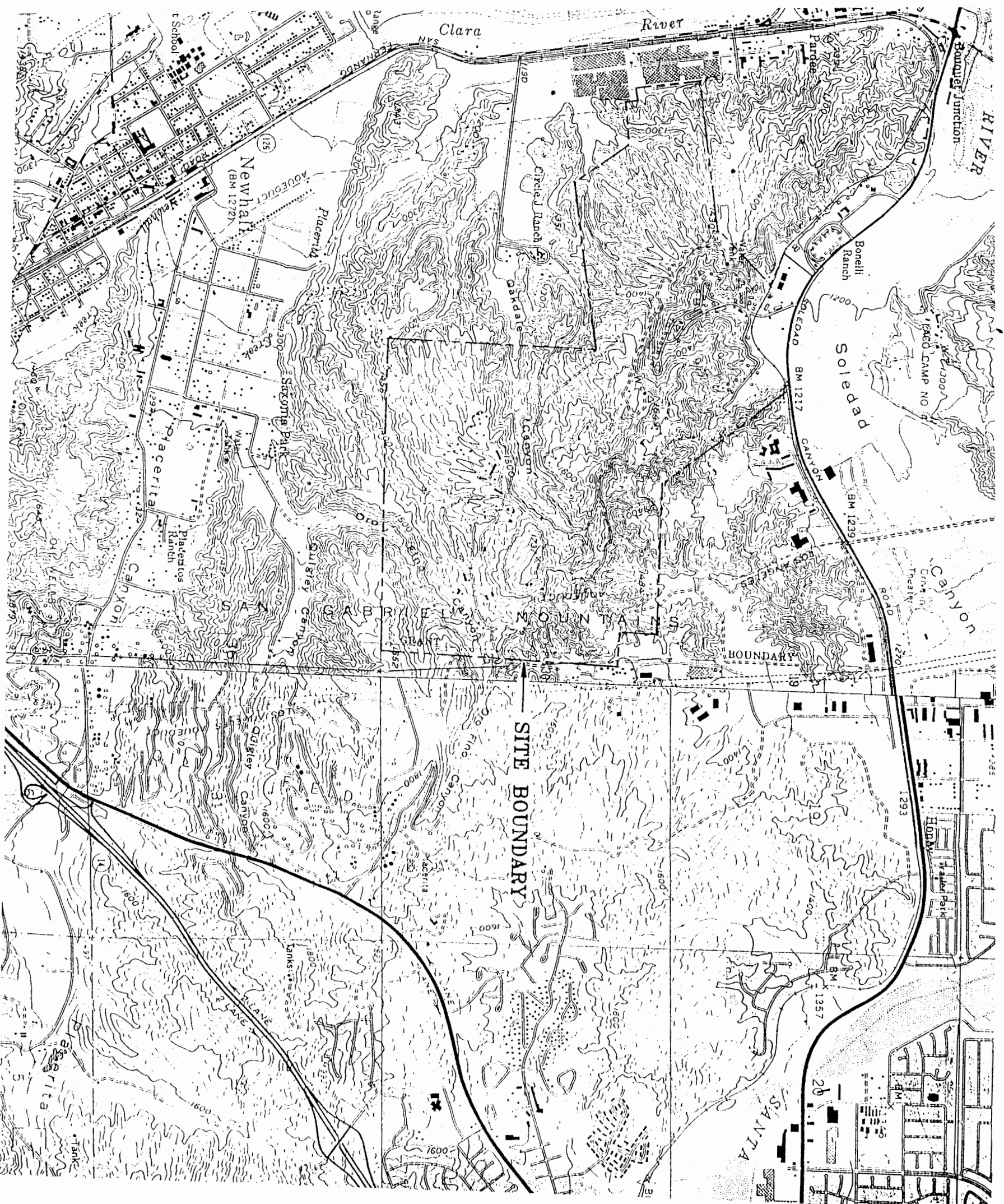
TABLE 3  
BACKGROUND WATER QUALITY PARAMETERS

Well No.	Date Sampled	Gross Alpha (pCi/l)	Gross Beta (pCi/l)	Lead (mg/l)	Fluoride (mg/l)	Nitrate (mg/l)	Turbidity (NTUs)
Detection Limits				-0.01 <sup>a</sup> 0.0002	0.1	0.4	0.2
MW-1	10/04/88	0.4 ± 2	0.7 ± 2	<0.01	-- <sup>b</sup>	--	--
	01/27/93	0 ± 1	4 ± 2	<0.01	0.2	--	--
	06/09/93	0.4 ± 1	0.7 ± 2	<0.01	0.2	3.9	0.4
	07/14/93	2 ± 2	0 ± 2	<0.01	0.4	4.8	0.9
	08/11/93	1 ± 1	4 ± 4	<0.01	0.3	4.8	0.9
	09/22/93	--	--	--	--	--	0.5
	03/10/94	--	--	--	--	ND	--
	06/22/94	2 ± 2	4 ± 2	<0.0002	0.2	3.6	1.0
MW-3	10/04/88	0.7 ± 1	2 ± 3	<0.01	--	--	--
	01/27/93	0.8 ± 1	2 ± 2	<0.01	0.3	--	--
	06/09/93	2 ± 1	1 ± 2	<0.01	0.2	1.6	<0.2
	07/14/93	2 ± 2	1 ± 2	<0.01	0.3	2.1	<0.2
	08/11/93	4 ± 2	3 ± 4	<0.01	0.2	2.2	0.3
	09/22/93	--	--	--	--	--	<0.2
	03/10/94	--	--	--	--	1.4	--
	06/22/94	1.0 ± 1	2 ± 2	4.9	0.2	3.6	0.3
MW-5 <sup>c</sup>	06/22/94	1.0 ± 1	3 ± 2	<0.0002	0.2	3.6	0.9
MW-6 <sup>c</sup>	06/22/94	0.1 ± 1	2 ± 2	<0.0002	0.2	3.8	0.8
MW-10 <sup>c</sup>	06/22/94	0.4 ± 1	4 ± 2	<0.0002	0.2	3.7	0.8

<sup>a</sup>Detection limit lowered from 0.01 to 0.0002 mg/l on 6/22/94.

<sup>b</sup>Sample was not taken.

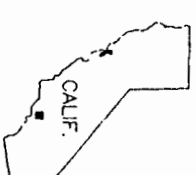
<sup>c</sup>Samples collected from monitoring wells MW-5, MW-6, and MW-7 during the twenty-third sampling event were analyzed for the background water quality parameters because of a repeated tolerance interval exceedence for sodium during previous sampling events.



EXPLANATION:  
 --- APPROXIMATE SITE  
 --- LOCATION BOUNDARY

#### General Notes

Base Map from U.S.G.S.  
 MINT CANYON, AND NEWHALL CALIFORNIA  
 7.5 Minute Topographic  
 Quadrangle  
 Photorevised 1988



QUADRANGLE LOCATION

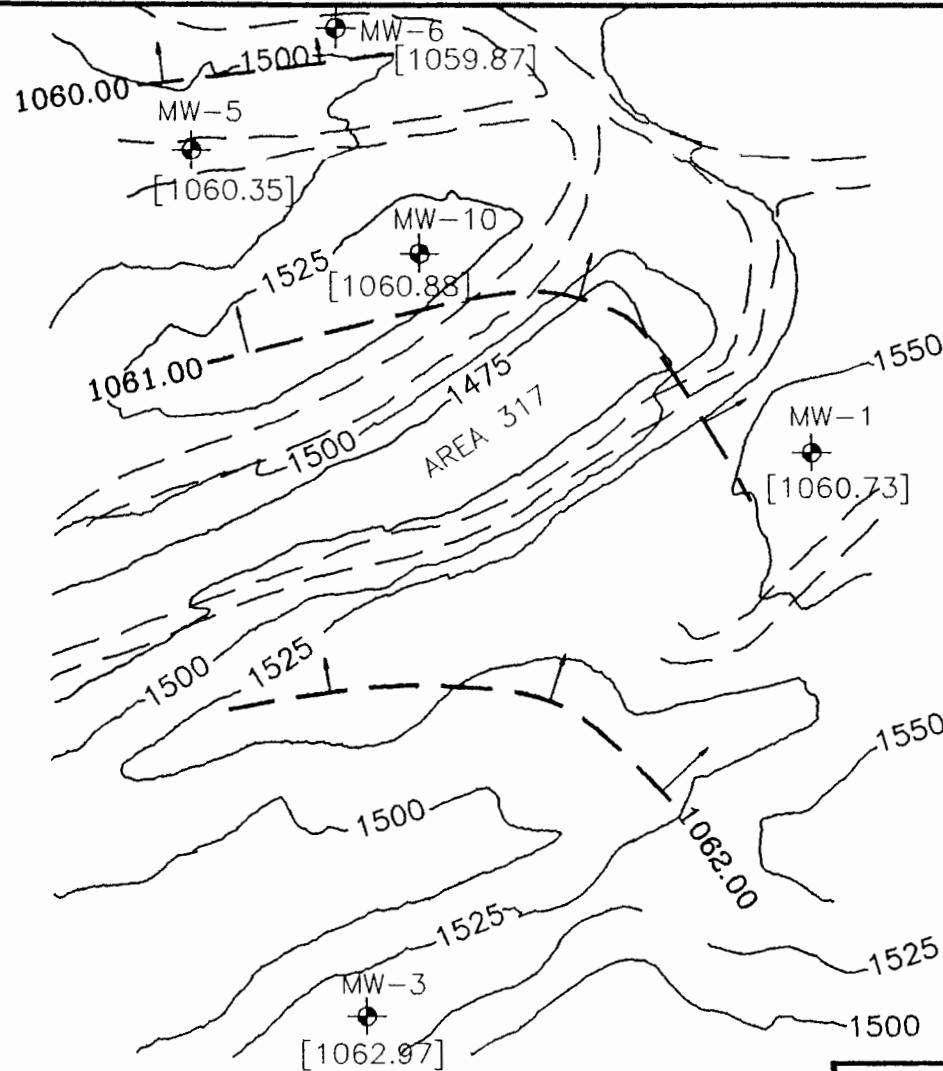
0 2,000  
 Approximate Scale  
 (in feet)



FIGURE 1

SITE LOCATION MAP  
 WHITTAKER CORPORATION, BERMITE FACILITY  
 22116 WEST SOLEDAD CANTON ROAD  
 SANTA CLARITA, CALIFORNIA

Project No.	Drawn	Acton • Mickelson • van Dam, Inc.
21001	CCB	Consulting Scientists, Engineers, and Geologists
File No.	Prepared	4511 Golden Foothill Parkway, #1
SD101SLM	PHB	El Dorado Hills, California 95762
Revision	Reviewed	(916) 939-7550
0		



0 200  
Approximate Scale  
(in feet)

## LEGEND

⊕ MW-1 MONITORING WELL LOCATION

[1062.97] GROUND WATER ELEVATION IN FEET  
RELATIVE TO MEAN SEA LEVEL

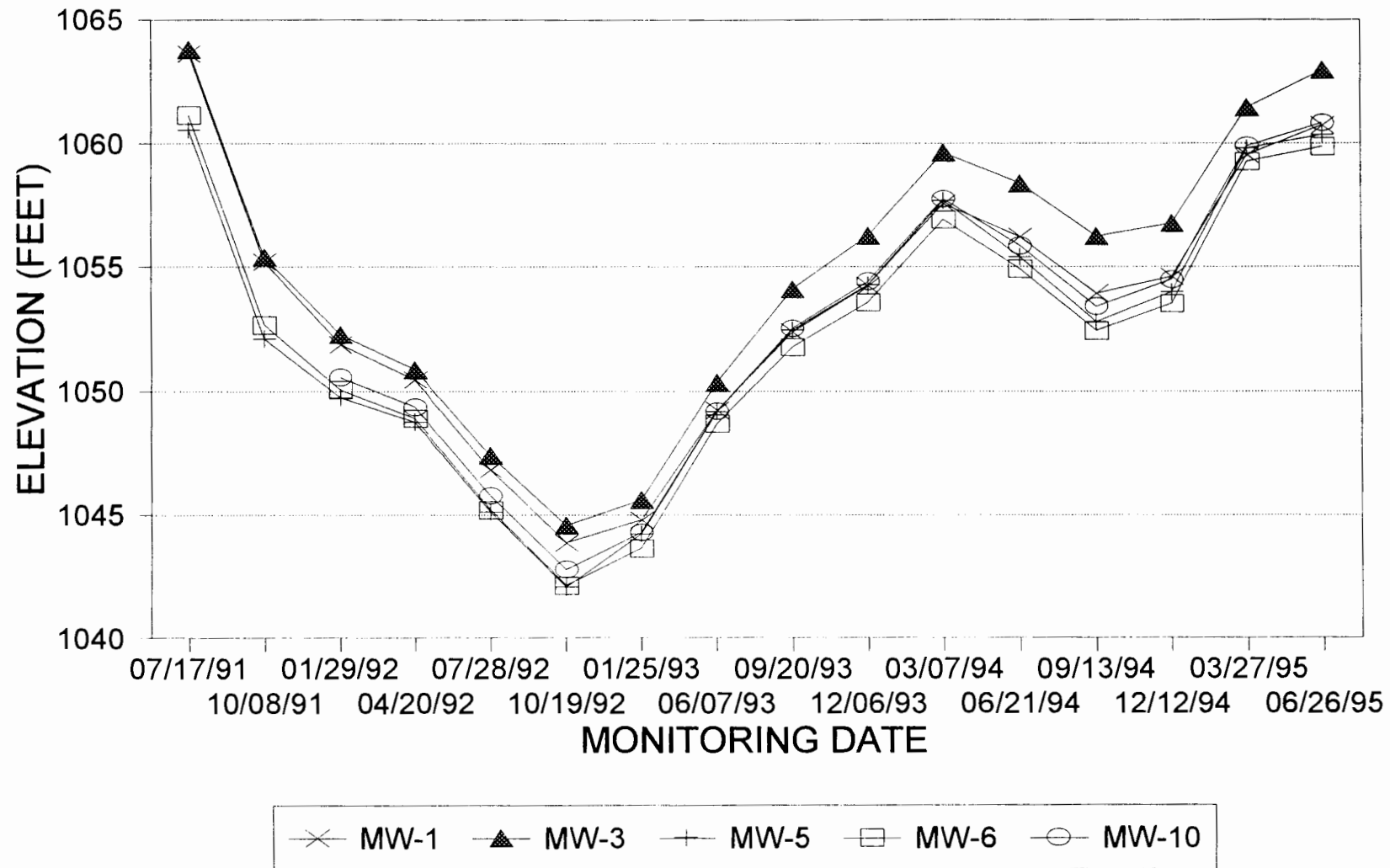
1060.00 ESTIMATED GROUND WATER CONTOUR IN FEET  
RELATIVE TO MEAN SEA LEVEL WITH ARROW  
INDICATING INFERRED DIRECTION OF GROUND  
WATER FLOW

FIGURE 2

AREA 317 GROUND WATER MONITORING WELL LOCATIONS  
AND ESTIMATED GROUND WATER FLOW DIRECTION (06-26-95)  
WHITTAKER CORPORATION, BERMITE FACILITY  
22116 WEST SOLEDAD CANYON ROAD, SANTA CLARITA, CALIFORNIA

Project No. 21001.53	Drawn CCB	Acton • Mickelson • Environmental, Inc. Consulting Scientists, Engineers, and Geologists  4511 Golden Foothill Parkway, #1 El Dorado Hills, California 95762 (916) 939-7550
File No. QM65WTC2	Prepared LGP	
Revision 0	Reviewed	

**FIGURE 3**  
**RCRA GROUND WATER MONITORING WELLS**  
**POTENTIOMETRIC SURFACE ELEVATIONS**



## **APPENDIX A**

### **DOCUMENT SUBMITTAL CHRONOLOGY**

The following documents have been submitted to Cal-EPA and U.S. EPA, Region IX, in fulfillment of the Closure Plan regarding ground water monitoring at Areas 317 and 342:

- Whittaker Corporation, Bermite Division, Santa Clarita, CA CAD064573108, Facility Closure Plan Modifications, April 1987.
- Revised Ground Water Monitoring Plan for the 317/342 Area, October 8, 1987.
- Proposed Interim Status Ground Water Monitoring Sampling and Analysis Program, December 1987.
- Documentation Report--Construction and Development of Wells for Ground Water Monitoring of the 342 and 317 Areas, February 1988.
- Verification Sampling Results at Selected RCRA Units, March 1988.
- RCRA Ground Water Monitoring System--Proposed Final Configuration, May 1988.
- Ground Water Sampling and Analysis Plan, August 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 1, December 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 2, March 1989.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 3, July 1989.
- Specific Plan for a Ground Water Quality Assessment Program, June 1989.
- Interim Response Action Plan, 317 Area Soil and Ground Water Remediation, June 1989.
- Site Ground Water Sampling and Analysis Plan, Appendix IV of 40 CFR 264.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 4, September 1989.
- Statistical Analysis--Well MW-2 Versus MW-1 and MW-3, October 1989.

- RCRA Ground Water Sampling, Quarterly Sampling Report No. 5, March 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 6, May 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 7, June 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 8, October 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 9, January 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 10, April 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 11, July 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 12, October 1991.
- Specific Plan for a Ground Water Quality Assessment Program for the 317 Surface Impoundment Area.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 13, January 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 14 and Report of Monitoring Well MW-10 Installation, January through March 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 15, April through June 1992.
- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 16, July through September 1992.
- Water Quality Monitoring and Response Plan for the Interim Status Area 317 Surface Impoundment, October 1992.

- Area 317 RCRA Quarterly Ground Water Quality Monitoring Report No. 17, October through December 1992.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 18, January through March 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 19, April through June 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 20, July through September 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 21, October through December 1993.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 22, January through March 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 23, April through June 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 24, June through September 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 25, October through December 1994.
- Area 317 RCRA Quarterly Ground Water Monitoring Report No. 26, January through March 1995.

**APPENDIX B**

**GROUND WATER SAMPLING PROCEDURES**



TABLE B-1

AREA 317 WELL EVACUATION  
BERMITE DIVISION, WHITTAKER CORPORATION

Well Number	Date Pump Started	Evacuation	Sampling <sup>a</sup>	Time and Date of Sample Collection
		Approximate Duration of Pumping (hours)	Duration of Pumping (minutes)	
MW-1	06-26-95	26.00	10.00	1030 (06-27-95)
MW-3	06-26-95	26.50	10.00	1100 (06-27-95)
MW-5	06-26-95	25.00	24.00	0920 (06-27-95)
MW-6	06-26-95	24.00	30.00	0840 (06-27-95)
MW-10	06-26-95	25.50	10.00	1000 (06-27-95)

<sup>a</sup>Flow rate from wells was reduced prior to sampling. Actual sample extraction flow rate for all wells approximately 100 milliliter/minute in a 1/4-inch pipe.

TABLE B-3

LABORATORY ANALYTICAL METHODS AND SAMPLE VOLUME  
AND CONTAINER REQUIREMENTS  
AREA 317 GROUND WATER MONITORING WELLS  
WHITTAKER CORPORATION, BERMITE DIVISION

Constituent	Analytical Method	Sample Volume (milliliters)	Container Type
<b>Ground Water Monitoring Parameters</b>			
pH	EPA 150.1	50	Plastic/glass
Specific Conductance	EPA 120.1	100	Plastic
Total Organic Carbon	EPA 415.1	250	Amber glass-TFE
Total Organic Halogen	EPA 9020	250	cap
Trichloroethylene	EPA 601	3 x 40	Amber glass-TFE
Sulfate	EPA 300.0	200	cap
Sodium	EPA 200.7	200	Amber glass-TFE
Iron	EPA 200.7	200	cap
Manganese	EPA 200.7	200	Plastic/glass
Chloride	EPA 300.0	100	Plastic
			Plastic
			Plastic
			Plastic/glass

TABLE B-4

AREA 317  
KEY TO ANALYSIS DESIGNATION LABELS ON SAMPLE CONTAINERS  
BERMITE DIVISION, WHITTAKER CORPORATION

Analysis Designation	Parameter(s) to be Analyzed
A	pH Specific Conductance (temperature corrected)
B	Total Organic Carbon (TOC)
C	Total Organic Halogen (TOX)
H	Sulfate, Chloride
O	Trichloroethene (TCE)
R	Sodium, Iron, Manganese

Each sample container was labeled with a unique sample number. The form of each label was as follows:

Well I.D./Analysis Designation/Sample Event No.

Where:

Well I.D. = MW-1, MW-3, MW-4, MW-5, MW-6, or MW-10.

Analysis Designation = A through V according to above table.

Sample Event No. = 1 through present event number.

**APPENDIX C**  
**CHAIN-OF-CUSTODY FORMS**



## CHAIN OF CUSTODY

QUARTERLY

~~Laboratory Copy (1 of 3)~~

[illegible]

**Corporate Offices & Laboratory**  
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S Berrington 6/28/95  
UPS Rec 6/28/95

Field Office  
1995 California  
(209) 734-9473  
Mobile: (209) 737-2399



## CHAIN OF CUSTODY

QUARTERLY

~~Laboratory Copy (1 of 3)~~

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 Project Name : MW3 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No Sampler(s): Comp sampler setup Date: / / Time: : Rush Results due By: / / Date Received: / / Lab Number: 504362				Type of Sampling: Composite(C) Grab(G) Type of Sample (P) Potable (NP) Non-Potable Wet Chem - E.C., pH Cont. 16oz.(p) TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p) EPA 601 - STK Cont. 40ml(v) Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>		TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information																		
Samp Num	Location/Description	Date Sampled	Time Sampled	Type of Sample	Type of Sample	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p)	EPA 601 - STK Cont. 40ml(v)	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>												
1	MW3/A/27	4/27/95	1100	G	MW		1																	
2	MW3/B/27	11	1102	G	MW			1																
3	MW3/C/27	11	1105	G	MW				1															
4	MW3/H/27	11	1108	G	MW					1														
5	MW3/O/27	11	1114	G	MW						3													
6	MW3/R/27	11	1110	G	MW							1												
Misc. Notes:				Relinquished By: Date: Time:				Relinquished By: Date: Time:				Relinquished By: Date: Time:												
Final Sample Disposition:				Received by: Date: Time:				Received by: Date: Time:				Received by: Date: Time:												
Lab Disposal: / / Returned to Client				Meth. of Disposal: Date Ret. / /																				

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FAX (805) 526 4132

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UPS Recd 6/28/95

**Field Office**  
**Visalia, California**  
 (209) 734 9473  
 Mobile (209) 737 2399



## CHAIN OF CUSTODY

~~QUARTERLY~~

~~Laboratory Copy (1 of 3)~~

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information												Sample Temp °C: _____ Sealed? _____	
Project Name : MW5 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				***SEE REVERSE SIDE**													
Sampler(s): <u>[Signature]</u> Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: ___/___/___ Lab Number: <u>504363</u>																	
Type of Sampling: Composite(C) Grab(G)				Type of Sample													
Type of Sample				(P) Potable (NP) Non-Potable													
Wet Chem - E.C., pH Cont. 16oz.(p)				Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p)													
TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>				TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>													
EPA 601 -STK Cont. 40ml(v)				Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>													
Lab 6/27																	
Samp Num				Location/Description													
Date Sampled				Time Sampled													
1				MW5/A/27 4/27/95 0920													
2				MW5/B/27 11 0922													
3				MW5/C/27 11 0925													
4				MW5/H/27 11 0928													
5				MW5/O/27 11 0932													
6				MW5/R/27 11 0930													
Misc. Notes:				Relinquished By: <u>[Signature]</u> Date: 6/27/95 Time: 1130													
Final Sample Disposition:				Received by: <u>[Signature]</u> Date: 6/27/95 Time: 1130													
Lab Disposal: ___/___/___ Returned to Client				Received by: <u>[Signature]</u> Date: 6/27/95 Time: 1130													
Meth. of Disposal: ___ Date Ret. ___/___/___				Received by: <u>[Signature]</u> Date: 6/27/95 Time: 1130													

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UPS REC 6/28/95

6/29/95  
DEC'D III 10 19

**Field Office**  
Visalia, California  
TELE (209) 734 9473  
Mobile (209) 737 2300



# ENVIRONMENTAL

# CHAIN OF CUSTODY

QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information												
Project Name : MW6 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				**SEE REVERSE SIDE**												
Sampler(s): <i>[Signature]</i> Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: ___/___/___ Lab Number: 504365				Type of Sampling: Composite(C) Grab(G) Type of Sample (P) Potable (NP) Non-Potable Wet Chem - E.C., pH Cont. 16oz.(p) TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p) EPA 601 Cont. 40ml(v) - STK Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>												
Samp Num	Location/Description	Date Sampled	Time Sampled	Type of Sample	Type of Sample	(P) Potable (NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p)	EPA 601 Cont. 40ml(v) - STK	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>	Lab 6/27			Sample Temp °C: ___ Sample Cond.: ___ Sealed? ___
1	MW6/A/27	6/27/95	0840	G	MW		1									
2	MW6/B/27	11	0842	G	MW			1								
3	MW6/C/27	11	0845	G	MW				1							
4	MW6/H/27	11	0848	G	MW					1						
5	MW6/O/27	11	0853	G	MW						3					
6	MW6/R/27	11	0850	G	MW							1				
Misc. Notes:				Relinquished By: <i>[Signature]</i> Date: 6/27/95 Time: 1130				Relinquished By: <i>[Signature]</i> Date: 6/27/95 Time: 1231				Relinquished By: <i>[Signature]</i> Date: 6/29/95 Time: 1111				
Final Sample Disposition:				Received by: <i>[Signature]</i> Date: 6/27/95 Time: 1130				Received by: <i>[Signature]</i> Date: 6/27/95 Time: 1231				Received by: <i>[Signature]</i> Date: 6/29/95 Time: 1111				
Lab Disposal: ___/___/___ Returned to Client				Meth. of Disposal: ___ Date Ret. ___/___/___				S Berrington 6/28/95				J. W. Starr 6/29/95				

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J. W. Starr 6/29/95  
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# ENVIRONMENTAL

# CHAIN OF CUSTODY

QUARTERLY

Laboratory Copy (1 of 3)

Client : Bermite Division of Whittaker Address: 22116 W. Soledad Canyon Road Saugus CA 91350 Phone : (805)259-2242 Fax : (805)259-2244 2-4570				TEST DESCRIPTIONS - See reverse side for Container, Preservative and Sampling information											
Project Name : MW10 Qtrly 317 Area Monitoring Contact person : Mr. Glen Abun-nur Purchase order Number: QA/QC report required: Yes No				**SEE REVERSE SIDE**											
Sampler(s): Comp sampler setup Date: ___/___/___ Time: ___:___ Rush Results due By: ___/___/___ Date Received: ___/___/___ Lab Number: 504367				Type of Sampling: Composite(C) Grab(G) Type of Sample (P) Potable (NP) Non-Potable Wet Chem - E.C., pH Cont. 16oz.(p) TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub> Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p) EPA 601 -STK Cont. 40ml(v) Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>											
Samp Num	Location/Description	Date Sampled	Time Sampled	Type of Sample	(P) Potable	(NP) Non-Potable	Wet Chem - E.C., pH Cont. 16oz.(p)	TOC Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	TOX Cont. 250ml(at)-H <sub>2</sub> SO <sub>4</sub>	Wet Chem - Cl, SO <sub>4</sub> Cont. 32oz.(p)	EPA 601 -STK Cont. 40ml(v)	Trace Metals-P - Fe, Mn, Na Cont. 32oz.(p)-HNO <sub>3</sub>	Sample Temp °C: ___ Sample Cond.: ___ Sealed? ___		
1	MW10/A/27	4/27/95	1000	G	MW		1								
2	MW10/B/27	11	1002	G	MW			1							
3	MW10/C/27	11	1005	G	MW				1						
4	MW10/H/27	11	1008	G	MW					1					
5	MW10/O/27	11	1012	G	MW						3				
6	MW10/R/27	11	1010	G	MW							1			
Misc. Notes:				Relinquished By:  Date: 6-27-95 Time: 1130				Relinquished By:  Date: 6/27/95 Time: 1234				Relinquished By:  Date: 6/27/95 Time: 1234			
Final Sample Disposition:				Received by:  Date: 6/27/95 Time: 1130				Received by:  Date: 6/27/95 Time: 1234				Received by:  Date: 6/27/95 Time: 1234			
Lab Disposal: ___/___/___ Returned to Client				Meth. of Disposal: ___ Date Ret. ___/___/___				S Berrington 6/28/95				y. Starn 6/28/95			

Corporate Offices & Laboratory  
 P.O. Box 272 853 Corporation Street  
 Santa Paula, CA 91351 0272  
 TEL: (805) 659 0910  
 FAX: (805) 525 4172

Office and Laboratory  
 2000 E. Main Street  
 Simi Valley, CA 91355  
 TEL: (209) 942 0181  
 FAX: (209) 942 0182

Field Office  
 Visalia, California  
 (209) 734 9473  
 11/18/95



## CHAIN OF CUSTODY

QUARTERLY

~~Laboratory Copy (1 of 3)~~

[illegible]

**Corporate Offices & Laboratory**  
P.O. Box 272 • 853 Corporation Street  
Santa Paula, CA 93061-0272  
TEL: (805) 659-0910  
FAX: (805) 525-4172

Office and Laboratory  
 S Berrington 6/28/95  
 UPS Rec'd 6/28/95

Field Office  
Visalia, California  
TEL (209) 734 9473  
Mobile (209) 737 2399



## CHAIN OF CUSTODY

~~QUARTERLY~~

~~Laboratory Copy (1 of 3)~~

[illegible]

**APPENDIX D**

**SAMPLE ANALYSES REQUEST FORMS**

# SAMPLE ANALYSIS REQUEST

## Sampling Information

Project No. 85-01.4 Project Name: 317 AREA BERMITE GTRLY. SAMPLING  
 Sampler Name: GLEN ABDUN-NUR/TIM BRICKER Tele. No. (805) 259-2241  
 Name of Person Receiving Samples: Stacey Berrington  
 Date Samples Received: 6/27/95  
 Internal Temperature of Sample Container: Q  
 Notes on Samples: \_\_\_\_\_

## Analysis Required

Sample I.D.	Laboratory I.D.	P.H. EC	TOC	TOX	SULFATE, CHLORIDE	EPA 601 TCE ONLY	IRON MANGANESE SODIUM
MW5/A/27	504363	X					
MW5/B/27			X				
MW5/C/27				X			
MW5/H/27					X		
MW5/O/27						X	
MW5/R/27	↓						X
MW6/A/27	504365	X					
MW6/B/27			X				
MW6/C/27				X			
MW6/H/27					X		
MW6/O/27						X	
MW6/R/27	↓						X

# SAMPLE ANALYSIS REQUEST

## Sampling Information

Project No. 85-G1.4 Project Name: 317 AREA BERMITE QTRLY. SAMPLING  
 Sampler Name: GLEN ABDUN-NUR/TIM BRICKER Tele. No. (805) 259-2241  
 Name of Person Receiving Samples: Stacey Berrington  
 Date Samples Received: 6/27/95  
 Internal Temperature of Sample Container: 0  
 Notes on Samples: \_\_\_\_\_

## Analysis Required

Sample I.D.	Laboratory I.D.	pH, EC	TOC	TOX	SULFATE, CHLORIDE	EPA 601 TCE ONLY	IRON MANGANESE SODIUM
MW1/A/27	504361	X					
MW1/B/27			X				
MW1/C/27				X			
MW1/H/27					X		
MW1/O/27						X	
MW1/R/27							X
MW3/A/27	504362	X					
MW3/B/27			X				
MW3/C/27				X			
MW3/H/27					X		
MW3/O/27						X	
MW3/R/27							X

# SAMPLE ANALYSIS REQUEST

## Sampling Information

Project No. 85-014 Project Name: 317 AREA BERMITE QTRLY. SAMPLING  
 Sampler Name: GLEN ABDIN-JUR/TIM BRICKER Tele. No. (805) 259-2241  
 Name of Person Receiving Samples: Stacey Berrington  
 Date Samples Received: 6/27/95  
 Internal Temperature of Sample Container: 0  
 Notes on Samples: \_\_\_\_\_

## Analysis Required

Sample I.D.	Laboratory I.D.	PH, EC	TOC	TOX	SULFATE, CHLORIDE	EPA 601	TCE ONLY	IRON, MANGANESE SODIUM
MW10/A/27	504367	X						
MW10/B/27			X					
MW10/C/27				X				
MW10/H/27					X			
MW10/O/27						X		
MW10/R/27								X
MW5/B/27/1A	504364		X					
MW5/C/27/1A				X				
MW5/E/27/1A						X		
MW6/B/27/1A	504366		X					
MW6/C/27/1A				X				
MW6/O/27/1A						X		

## **APPENDIX E**

### **FGL QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROGRAM**



# Certificate of Analysis

Bottle Type & QA Level: B Level 1  
Wash-B Description: 40 mL Amber Vial

Lot No.: B4277010

## VOLATILES QUALITY ASSURANCE

This Certificate verifies that this lot of bottles has been cleaned according to the EPA wash procedure set forth in the EPA Statement of Work "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers" and that this lot has been tested and found to comply with or be lower than the EPA specifications as set forth in the EPA Statement of Work "Superfund Analytical Methods For Low Concentration Water For Organics Analysis 6/91", (Document # OLC02.0).

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Chloromethane	< 1
Bromomethane	< 1
Vinyl chloride	< 1
Chloroethane	< 1
Methylene chloride	< 2
Acetone	< 5
Carbon disulfide	< 1
1,1-Dichloroethene	< 1
1,1-Dichloroethane	< 1
cis-1,2-Dichloroethene	< 1
trans-1,2-Dichloroethene	< 1
Chloroform	< 1
1,2-Dichloroethane	< 1
2-Butanone	< 5
Bromochloromethane	< 1
1,1,1-Trichloroethane	< 1
Carbon tetrachloride	< 1
Bromodichloromethane	< 1
1,2-Dichloropropane	< 1
cis-1,3-Dichloropropene	< 1

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Trichloroethene	< 1
Dibromochloromethane	< 1
1,1,2-Trichloroethane	< 1
Benzene	< 1
trans-1,3-Dichloropropene	< 1
Bromoform	< 1
4-Methyl-2-pentanone	< 5
2-Hexanone	< 5
Tetrachloroethene	< 1
1,1,2,2-Tetrachloroethane	< 1
1,2-Dibromoethane	< 1
Toluene	< 1
Chlorobenzene	< 1
Ethylbenzene	< 1
Styrene	< 1
Xylenes (total)	< 1
1,3-Dichlorobenzene	< 1
1,4-Dichlorobenzene	< 1
1,2-Dichlorobenzene	< 1
1,2-Dibromo-3-chloropropane	< 1

IF EPES CAN BE OF ANY FURTHER ASSISTANCE, PLEASE CALL (800) 331-7425 AND ASK FOR OUR TECHNICAL SERVICE DEPARTMENT.

Approved:

*Jul Shepherd*



**EAGLE  PICHER**  
ENVIRONMENTAL SERVICES

36 B. J. TUNNELL BLVD • MIAMI, OKLAHOMA 74354 • (800) 331-7425

# Certificate of Analysis

Bottle Type & QA Level: Level 1  
Description: 250 mL Amber B.R. OTWS

Lot No.: 24031060  
Date: 2-8-94

## VOLATILES QUALITY ASSURANCE

This Certificate verifies that this lot of bottles has been cleaned according to the EPA wash procedure set forth in the EPA Statement of Work "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers" and that this lot has been tested and found to comply with or be lower than the EPA specifications as set forth in the EPA Statement of Work "Superfund Analytical Methods For Low Concentration Water For Organics Analysis 6/91", (Document # OLC02.0).

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Chloromethane	< 1
Bromomethane	< 1
Vinyl chloride	< 1
Chloroethane	< 1
Methylene chloride	< 2
Acetone	< 5
Carbon disulfide	< 1
1,1-Dichloroethene	< 1
1,1-Dichloroethane	< 1
cis-1,2-Dichloroethene	< 1
trans-1,2-Dichloroethene	< 1
Chloroform	< 1
1,2-Dichloroethane	< 1
2-Butanone	< 5
Bromochloromethane	< 1
1,1,1-Trichloroethane	< 1
Carbon tetrachloride	< 1
Bromodichloromethane	< 1
1,2-Dichloropropane	< 1
cis-1,3-Dichloropropene	< 1

ANALYTE	CONTRACT REQUIRED QUANTITATION LIMIT (ug/L)
Trichloroethene	< 1
Dibromochloromethane	< 1
1,1,2-Trichloroethane	< 1
Benzene	< 1
trans-1,3-Dichloropropene	< 1
Bromoform	< 1
4-Methyl-2-pentanone	< 5
2-Hexanone	< 5
Tetrachloroethene	< 1
1,1,2,2-Tetrachloroethane	< 1
1,2-Dibromoethane	< 1
Toluene	< 1
Chlorobenzene	< 1
Ethylbenzene	< 1
Styrene	< 1
Xylenes (total)	< 1
1,3-Dichlorobenzene	< 1
1,4-Dichlorobenzene	< 1
1,2-Dichlorobenzene	< 1
1,2-Dibromo-3-chloropropane	< 1

IF EPES CAN BE OF ANY FURTHER ASSISTANCE, PLEASE CALL (800) 331-7425 AND ASK FOR OUR TECHNICAL SERVICE DEPARTMENT.

Approved:

*Jul. Shepherd* 

**EAGLE PITCHER**  
ENVIRONMENTAL SERVICES

36 B J TUNNELL BLVD • MIAMI, OKLAHOMA 74354 • (800) 331-7425

This is your Certificate of Analysis for I-CHEM SUPERFUND-ANALYZED™ product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specifications and Guidance for Contaminant-Free Sample Containers" for use in Superfund and other hazardous waste programs.

### Group 1. Glass and HDPE Sample Containers for use in the analysis of Metals

Analyte	Detection Limit (ug/L)	Analyte	Detection Limit (ug/L)	Analyte	Detection Limit (ug/L)
Aluminum	< 80	Cobalt	< 10	Selenium	< 2
Antimony	< 5	Copper	< 10	Silver	< 5
Arsenic	< 2	Iron	< 50	Sodium	< 5000
Barium	< 20	Lead	< 2	Sodium (HDPE)	< 100
Barium (Amber HDPE)	< 50	Magnesium	< 100	Thallium	< 5
Beryllium	< 0.5	Manganese	< 10	Vanadium	< 10
Cadmium	< 1	Mercury	< 0.2	Zinc	< 10
Calcium	< 500	Nickel	< 20	Zinc (Amber HDPE)	< 500
Calcium (HDPE)	< 100	Potassium	< 750		
Chromium	< 10	Potassium (HDPE)	< 100		

### Group 2. Glass Sample Containers for use in the analysis of Semivolatiles, Pesticides, and PCBs

Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)
Acenaphthene	< 5	Acenaphthylene	< 5	Anthracene	< 5
Benzo(a)anthracene	< 5	Benzo(a)pyrene	< 5	Benzo(b)fluoranthene	< 5
Benzo(k)fluoranthene	< 5	Benzo(g,h,i)perylene	< 5	Benzoic Acid	< 20
Benzyl Alcohol	< 5	4-Bromophenyl-phenylether	< 5	Butylbenzylphthalate	< 5
4-Chloroaniline	< 5	4-Chloro-3-methylphenol	< 5	bis-(2-Chloroethoxy)methane	< 5
bis-(2-Chloroethyl)ether	< 5	bis-(2-Chloroisopropyl)ether	< 5	2-Chloronaphthalene	< 5
2-Chlorophenol	< 5	4-Chlorophenyl-phenylether	< 5	Chrysene	< 5
Di-n-butylphthalate	< 5	Di-n-octylphthalate	< 5	Dibenz(a,h)anthracene	< 5
Dibenzofuran	< 5	1,2-Dichlorobenzene	< 5	1,4-Dichlorobenzene	< 5
1,3-Dichlorobenzene	< 5	3,3'-Dichlorobenzidine	< 5	2,4-Dichlorophenol	< 5
Diethylphthalate	< 5	Dimethylphthalate	< 5	2,4-Dimethylphenol	< 5
4,6-Dinitro-2-methylphenol	< 20	2,4-Dinitrophenol	< 20	2,4-Dinitrotoluene	< 5
2,6-Dinitrotoluene	< 5	bis-(2-Ethylhexyl)phthalate	< 5	Fluoranthene	< 5
Fluorene	< 5	Hexachlorobenzene	< 5	Hexachlorobutadiene	< 5
Hexachlorocyclopentadiene	< 5	Hexachloroethane	< 5	Indeno(1,2,3-cd)pyrene	< 5
Isophorone	< 5	2-Methylnaphthalene	< 5	2-Methylphenol	< 5
4-Methylphenol	< 5	2-Nitroaniline	< 20	3-Nitroaniline	< 20
4-Nitroaniline	< 20	N-Nitroso-di-n-propylamine	< 5	N-Nitrosodimethylamine	< 5
N-Nitrosodiphenylamine	< 5	Naphthalene	< 5	Nitrobenzene	< 5
2-Nitrophenol	< 5	4-Nitrophenol	< 20	Pentachlorophenol	< 20
Phenanthrene	< 5	Phenol	< 5	Pyrene	< 5
1,2,4-Trichlorobenzene	< 5	2,4,5-Trichlorophenol	< 20	2,4,6-Trichlorophenol	< 5
Azobenzene	< 5	Carbazole	< 5	Aldrin	< 0.01
4,4'-DDD	< 0.02	Endosulfan II	< 0.02	Alpha-BHC	< 0.01
4,4'-DDE	< 0.02	Endosulfan Sulfate	< 0.02	Beta-BHC	< 0.01
4,4'-DDT	< 0.02	Endrin	< 0.02	Delta-BHC	< 0.01
Dieldrin	< 0.02	Endrin Aldehyde	< 0.02	Gamma-BHC	< 0.01
Endosulfan I	< 0.01	Heptachlor	< 0.01	Heptachlor Epoxide	< 0.01
Metoxychlor	< 0.10	Endrin Ketone	< 0.02	Alpha-Chlordane	< 0.01
Gamma-Chlordane	< 0.01	Toxaphene	< 0.30	Aroclor-1016	< 0.20
Aroclor-1221	< 0.20	Aroclor-1232	< 0.20	Aroclor-1242	< 0.20
Aroclor-1248	< 0.20	Aroclor-1254	< 0.20	Aroclor-1260	< 0.20
Aroclor-1262	< 0.20	Aroclor-1268	< 0.20		

### Group 3. Glass Sample Containers for use in the analysis of Volatile Organics

Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)	Compound	Quantitation Limit(ug/L)
Acetone	< 5	1,3-Dichloropropane	< 1	Benzene	< 1
2,2-Dichloropropane	< 1	Bromobenzene	< 1	1,2-Dichloropropane	< 1
Bromodichloromethane	< 1	trans-1,3-Dichloropropene	< 1	Bromoform	< 1
cis-1,3-Dichloropropene	< 1	Bromomethane	< 1	1,1-Dichloropropene	< 1
2-Butanone	< 5	Ethylbenzene	< 1	tert-Butylbenzene	< 1
Hexachlorobutadiene	< 1	sec-Butylbenzene	< 1	2-Hexanone	< 5
n-Butylbenzene	< 1	Isopropylbenzene	< 1	Carbon Disulfide	< 1
p-Isopropyltoluene	< 1	Carbon Tetrachloride	< 1	4-Methyl-2-pentanone	< 5
Chlorobenzene	< 1	Methylene Chloride	< 2	Chloroethane	< 1
Naphthalene	< 1	Chloroform	< 1	n-Propylbenzene	< 1
Chloromethane	< 1	Styrene	< 1	2 & 4 Chlorotoluene	< 1
1,1,2,2-Tetrachloroethane	< 1	1,2-Dibromo-3-chloropropane	< 1	Tetrachloroethene	< 1
Dibromochloromethane	< 1	Toluene	< 1	1,2-Dibromoethane (EDB)	< 1
1,2,3-Trichlorobenzene	< 1	Dibromomethane	< 1	1,2,4-Trichlorobenzene	< 1
1,4-Dichlorobenzene	< 1	1,1,2-Trichloroethane	< 1	1,3-Dichlorobenzene	< 1
1,1,1-Trichloroethane	< 1	1,2-Dichlorobenzene	< 1	Trichloroethene	< 1
Dichlorodifluoromethane	< 1	Trichlorofluoromethane	< 1	1,2-Dichloroethane	< 1
1,2,3-Trichloropropane	< 1	1,1-Dichloroethane	< 1		
trans-1,2-Dichloroethene	< 1	1,3,5-Trimethylbenzene	< 1		
Acetate	< 5	1,4-Dichloroethene	< 1		
Chloride (total)	< 1	1,2,4-Trimethylbenzene	< 1		
Chloride	< 1	cis-1,2-Dichloroethene	< 1		

Keep this certificate for your records and to facilitate any necessary correspondence. For additional information, contact our Technical Service Department at 714-968-1689 or (800) 262-5006 inside California.

*E. Benson*  
Quality Assurance Manager

Production Number 4355013

Item Number 313-1000

 Item Description: BOTTLE, NAT HDPE CYLINDER ROUND  
 Group 1 is applicable

This is your Certificate of Analysis for I-CHEM Certified™ 300 Series product which has been prepared in accordance with I-CHEM Performance-Based Specifications. This product meets or exceeds analyte specifications established in the U.S. EPA "Specifications and Guidance for Contaminant-Free Sample Containers" for use in Superfund and other hazardous waste programs.

**Group 1. Glass and HDPE Sample Containers for use in the analysis of Metals**

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Aluminum	< 80	Calcium (all HDPE)	< 100	Magnesium	< 100	Selenium	< 2
Antimony	< 5	Chromium	< 10	Manganese	< 10	Silver	< 5
Arsenic	< 2	Cobalt	< 10	Mercury	< 0.2	Sodium	< 5000
Barium	< 20	Copper	< 10	Nickel	< 20	Sodium (all HDPE)	< 100
Beryllium	< 0.5	Iron	< 50	Potassium	< 750	Thallium	< 5
Cadmium	< 1	Lead	< 2	Potassium (all HDPE)	< 100	Vanadium	< 10
Calcium	< 500					Zinc	< 10

In addition to the above analytes, NALGENE® containers are certified for these analytes:

Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)	Analyte	Detection Limit (µg/L)
Chloride	< 100	Fluoride	< 20	Nitrite	< 50	Sulfate	< 100
Cyanide	< 10	Nitrate	< 20	Paraquat (amber only)	< 0.4	Sulfide	< 30
Diquat (amber only)	< 1.0					Sulfite	< 1000

**Group 2. Glass Sample Containers for use in the analysis of Semivolatiles and Pesticides/PCBs**

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acenaphthene	< 5	Acenaphthylene	< 5	Anthracene	< 5
Benzo(a)anthracene	< 5	Benzo(a)pyrene	< 5	Benzo(b)fluoranthene	< 5
Benzo(k)fluoranthene	< 5	Benzo(g,h,i)perylene	< 5	Benzoic Acid	< 20
Benzyl Alcohol	< 5	4-Bromophenyl-phenylether	< 5	Butylbenzylphthalate	< 5
4-Chloroaniline	< 5	4-Chloro-3-methylphenol	< 5	bis-(2-Chloroethoxy)methane	< 5
bis-(2-Chloroethyl)ether	< 5	bis-(2-Chloroisopropyl)ether	< 5	2-Chloronaphthalene	< 5
2-Chlorophenol	< 5	4-Chlorophenyl-phenylether	< 5	Chrysene	< 5
Di-n-butylphthalate	< 5	Di-n-octylphthalate	< 5	Dibenzo(a,h)anthracene	< 5
Dibenzofuran	< 5	1,2-Dichlorobenzene	< 5	1,4-Dichlorobenzene	< 5
1,3-Dichlorobenzene	< 5	3,3'-Dichlorobenzidine	< 5	2,4-Dichlorophenol	< 5
Diethylphthalate	< 5	Dimethylphthalate	< 5	2,4-Dimethylphenol	< 5
4,6-Dinitro-2-methylphenol	< 20	2,4-Dinitrophenol	< 20	2,4-Dinitrotoluene	< 5
2,6-Dinitrotoluene	< 5	bis-(2-Ethylhexyl)phthalate	< 5	Fluoranthene	< 5
Fluorene	< 5	Hexachlorobenzene	< 5	Hexachlorobutadiene	< 5
Hexachlorocyclopentadiene	< 5	Hexachloroethane	< 5	Indeno(1,2,3-cd)pyrene	< 5
Isophorone	< 5	2-Methylnaphthalene	< 5	2-Methylphenol	< 5
4-Methylphenol	< 5	2-Nitroaniline	< 20	3-Nitroaniline	< 20
4-Nitroaniline	< 20	N-Nitroso-di-n-propylamine	< 5	N-Nitrosodimethylamine	< 5
N-Nitrosodiphenylamine	< 5	Naphthalene	< 5	Nitrobenzene	< 5
2-Nitrophenol	< 5	4-Nitrophenol	< 20	Pentachlorophenol	< 20
Phenanthrene	< 5	Phenol	< 5	Pyrene	< 5
1,2,4-Trichlorobenzene	< 5	2,4,5-Trichlorophenol	< 20	2,4,6-Trichlorophenol	< 5
Azobenzene	< 5	Carbazole	< 5	Aldrin	< 0.01
4,4'-DDD	< 0.02	Endosulfan II	< 0.02	Alpha-BHC	< 0.01
4,4'-DDE	< 0.02	Endosulfan Sulfate	< 0.02	Beta-BHC	< 0.01
4,4'-DDT	< 0.02	Endrin	< 0.02	Delta-BHC	< 0.01
Dieldrin	< 0.02	Endrin Aldehyde	< 0.02	Gamma-BHC	< 0.01
Endosulfan I	< 0.01	Heptachlor	< 0.01	Heptachlor Epoxide	< 0.01
Methoxychlor	< 0.10	Endrin Ketone	< 0.02	Alpha-Chlordane	< 0.01
Gamma-Chlordane	< 0.01	Toxaphene	< 0.30	Aroclor-1016	< 0.20
Aroclor-1221	< 0.20	Aroclor-1232	< 0.20	Aroclor-1242	< 0.20
Aroclor-1248	< 0.20	Aroclor-1254	< 0.20	Aroclor-1260	< 0.20
Aroclor-1262	< 0.20	Aroclor-1268	< 0.20		

**Group 3. Glass Sample Containers for use in the analysis of Volatiles**

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit (µg/L)
Acetone	< 5	1,3-Dichloropropane	< 1	Benzene	< 1
2,2-Dichloropropane	< 1	Bromobenzene	< 1	1,2-Dichloropropane	< 1
Bromodichloromethane	< 1	trans-1,3-Dichloropropene	< 1	Bromoform	< 1
cis-1,3-Dichloropropene	< 1	Bromomethane	< 1	1,1-Dichloropropene	< 1
2-Butanone	< 5	Ethylbenzene	< 1	tert-Butylbenzene	< 1
Hexachlorobutadiene	< 1	sec-Butylbenzene	< 1	2-Hexanone	< 5
n-Butylbenzene	< 1	Isopropylbenzene	< 1	Carbon Disulfide	< 1
p-Isopropyltoluene	< 1	Carbon Tetrachloride	< 1	4-Methyl-2-pentanone	< 5
Chlorobenzene	< 1	Methylene Chloride	< 2	Chloroethane	< 1
Naphthalene	< 1	Chloroform	< 1	n-Propylbenzene	< 1
Chloromethane	< 1	Styrene	< 1	2 & 4 Chlorotoluene	< 1
1,1,2,2-Tetrachloroethane	< 1	1,2-Dibromo-3-chloropropane	< 1	Tetrachloroethene	< 1
Dibromochloromethane	< 1	Toluene	< 1	1,2-Dibromochloroethane (EDB)	< 1
1,2,3-Trichlorobenzene	< 1	Dibromomethane	< 1	1,2,4-Trichlorobenzene	< 1
1,4-Dichlorobenzene	< 1	1,1,2-Trichloroethane	< 1	1,3-Dichlorobenzene	< 1
1,1,1-Trichloroethane	< 1	1,2-Dichlorobenzene	< 1	Trichloroethene	< 1
Dichlorodifluoromethane	< 1	Trichlorofluoromethane	< 1	1,2-Dichloroethane	< 1
1,2,3-Trichloropropane	< 1	1,1-Dichloroethane	< 1		
trans-1,2-Dichloroethene	< 1	1,3,5-Trimethylbenzene	< 1		
Vinyl Acetate	< 5	1,1-Dichloroethene	< 1		
Xylenes (total)	< 1	1,2,4-Trimethylbenzene	< 1		
Vinyl Chloride	< 1	cis-1,2-Dichloroethene	< 1		

Please keep this certificate for your records and to facilitate any necessary correspondence.  
 If additional information is required, contact our Technical Service Department at (800) 443-1689.

*Randy E. Benson*

Randy E. Benson  
 Corporate Quality Assurance Manager

300COA  
 8/12/94

## **APPENDIX F**

### **BLANK, DUPLICATE, AND SPIKE SAMPLE ANALYTICAL REPORTS**



# ENVIRONMENTAL

## Analytical Chemists

July 7, 1995

ORGANIC Quality Assurance Report for sample: 504366

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

KAD/DHN:c1

FGL ENVIRONMENTAL, INC.

Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504366

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

KAD/DHN:c1

FGL ENVIRONMENTAL, INC.

Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 7, 1995

ORGANIC Quality Assurance Report for sample: 504364

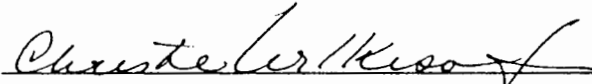
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0	

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

KAD/DHN:c1

FGL ENVIRONMENTAL, INC.

  
Darrell H. Nelson, President, Laboratory Director





# ENVIRONMENTAL

Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504364

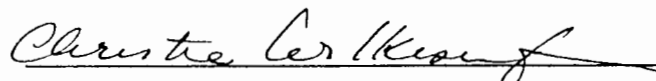
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

INORGANIC Quality Assurance Report for sample: 504361

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	22A	200.7	ug/L-mg/L	50	ND		CCV	1000	108	90-110		MS	556	121	117	75-125	2.9	20.0	
Manganese	22A	200.7	ug/L-mg/L	30	ND		CCV	1000	107	90-110		MS	556	126	119	75-125	6.1	20.0	105
Sodium	22A	200.7	ug/L-mg/L	1.0	ND		CCV	100	99.8	90-110		MS	22.2	114	106	75-125	1.9	20.0	
Chloride	92A	300.0	mg/L	1.0	ND		CCV	72.5	106	90-110		MS	200	109	114	85-111	2.6	4.1	410
Conductivity	82A	120.1	umhos/cm2		N/A		CCV	1410	98.7	75-125		Dup	447	N/A	N/A	N/A	0.4	0.8	
pH	02A	150.1	units		N/A		CCV	8.00	100	90-110		Dup	7.97	N/A	N/A	N/A	0.1	1.4	
Sulfate	92A	300.0	mg/L	1.0	ND		CCV	65.5	103	90-110		MS	200	108	109	75-123	1.1	2.8	

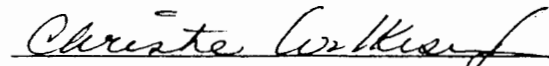
FGL ID = 19950627 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

### Notes:

105 Lab error determined to be the cause. The problem was identified and does not affect the samples.  
410 Matrix Spike (MS) not within Acceptance Range (AR) and/or Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Batch qualified based on the LCS, CCV, or ICV recovery.

FGL ENVIRONMENTAL, INC.

SP/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504361

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504361

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

INORGANIC Quality Assurance Report for sample: 504362

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	22A	200.7	ug/L-mg/L	50	ND		CCV	1000	108	90-110		MS	556	121	117	75-125	2.9	20.0	
Manganese	22A	200.7	ug/L-mg/L	30	ND		CCV	1000	107	90-110		MS	556	126	119	75-125	6.1	20.0	105
Sodium	22A	200.7	ug/L-mg/L	1.0	ND		CCV	100	99.8	90-110		MS	22.2	114	106	75-125	1.9	20.0	
Chloride	92B	300.0	mg/L	1.0	ND		CCV	72.5	110	90-110		MS	200	87.0	87.8	85-111	0.1	4.1	
Conductivity	82A	120.1	umhos/cm2		N/A		CCV	1410	98.7	75-125		Dup	447	N/A	N/A	N/A	0.4	0.8	
pH	02A	150.1	units		N/A		CCV	8.00	100	90-110		Dup	7.97	N/A	N/A	N/A	0.1	1.4	
Sulfate	92B	300.0	mg/L	1.0	ND		CCV	65.5	106	90-110		MS	200	105	102	75-123	0.9	2.8	

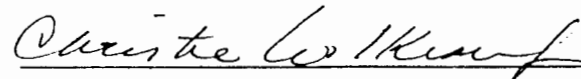
FGL ID = 19950627 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

### Notes:

105 Lab error determined to be the cause. The problem was identified and does not affect the samples.

FGL ENVIRONMENTAL, INC.

SP/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504362

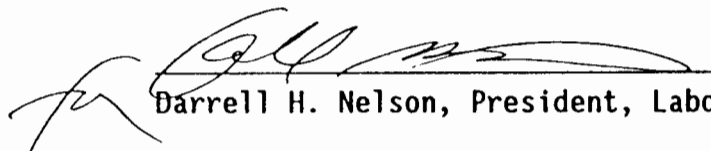
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504362

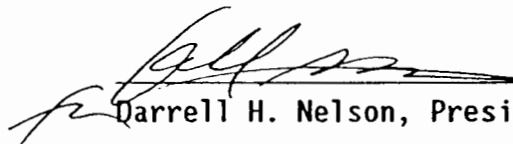
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

INORGANIC Quality Assurance Report for sample: 504363

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Manganese	22A	200.7	ug/L-mg/L	30	ND		CCV	1000	107	90-110		MS	556	126	119	75-125	6.1	20.0	105
Sodium	22A	200.7	ug/L-mg/L	1.0	ND		CCV	100	99.8	90-110		MS	22.2	114	106	75-125	1.9	20.0	
Chloride	92B	300.0	mg/L	1.0	ND		CCV	72.5	110	90-110		MS	200	87.0	87.8	85-111	0.1	4.1	
Conductivity	82A	120.1	umhos/cm2		N/A		CCV	1410	98.7	75-125		Dup	447	N/A	N/A	N/A	0.4	0.8	
pH	02A	150.1	units		N/A		CCV	8.00	100	90-110		Dup	7.97	N/A	N/A	N/A	0.1	1.4	
Sulfate	92B	300.0	mg/L	1.0	ND		CCV	65.5	106	90-110		MS	200	105	102	75-123	0.9	2.8	

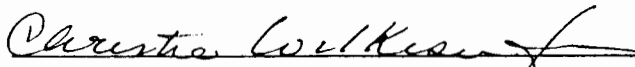
FGL ID = 19950627 ND => Not Detected at ar above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

### Notes:

105 Lab error determined to be the cause. The problem was identified and does not affect the samples.

FGL ENVIRONMENTAL, INC.

SP/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director





# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504363

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV NOTE
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504363

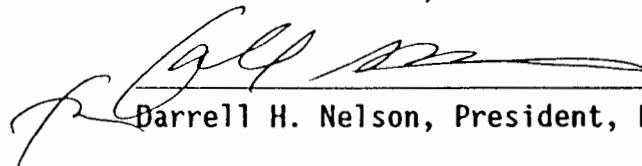
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

INORGANIC Quality Assurance Report for sample: 504365

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	22A	200.7	ug/L-mg/L	50	ND		CCV	1000	108	90-110		MS	556	121	117	75-125	2.9	20.0	
Manganese	22A	200.7	ug/L-mg/L	30	ND		CCV	1000	107	90-110		MS	556	126	119	75-125	6.1	20.0	105
Sodium	22A	200.7	ug/L-mg/L	1.0	ND		CCV	100	99.8	90-110		MS	22.2	114	106	75-125	1.9	20.0	
Chloride	92B	300.0	mg/L	1.0	ND		CCV	72.5	110	90-110		MS	200	87.0	87.8	85-111	0.1	4.1	
Conductivity	82A	120.1	umhos/cm2		N/A		CCV	1410	98.7	75-125		Dup	447	N/A	N/A	N/A	0.4	0.8	
pH	02A	150.1	units		N/A		CCV	8.00	100	90-110		Dup	7.97	N/A	N/A	N/A	0.1	1.4	
Sulfate	92B	300.0	mg/L	1.0	ND		CCV	65.5	106	90-110		MS	200	105	102	75-123	0.9	2.8	

FGL ID = 19950627 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

### Notes:

105 Lab error determined to be the cause. The problem was identified and does not affect the samples.

FGL ENVIRONMENTAL, INC.

SP/DHN:c1

*Darrell H. Nelson*  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504365

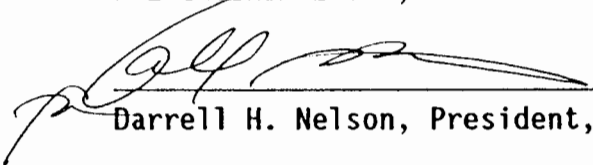
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC						
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504365

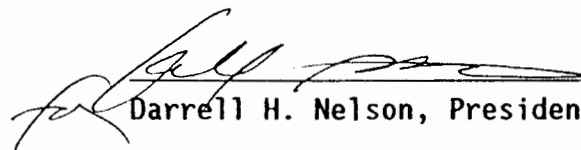
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20	

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

INORGANIC Quality Assurance Report for sample: 504367

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

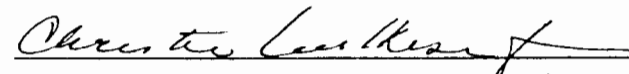
Constituent	BATCH ID	EPA Method	Units	BLANK QA/QC			CALIBRATION QA/QC					METHOD QA/QC							
				DLR	Result	NOTE	Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
Iron	22A	200.7	ug/L-mg/L	50	ND		CCV	1000	108	90-110		MS	556	121	117	75-125	2.9	20.0	
Manganese	22A	200.7	ug/L-mg/L	30	ND		CCV	1000	107	90-110		MS	556	126	119	75-125	6.1	20.0	105
Sodium	22A	200.7	ug/L-mg/L	1.0	ND		CCV	100	99.8	90-110		MS	22.2	114	106	75-125	1.9	20.0	
Chloride	92B	300.0	mg/L	1.0	ND		CCV	72.5	110	90-110		MS	200	87.0	87.8	85-111	0.1	4.1	
Conductivity	82A	120.1	umhos/cm2		N/A		CCV	1410	98.7	75-125		Dup	447	N/A	N/A	N/A	0.4	0.8	
pH	02A	150.1	units		N/A		CCV	8.00	100	90-110		Dup	7.97	N/A	N/A	N/A	0.1	1.4	
Sulfate	92B	300.0	mg/L	1.0	ND		CCV	65.5	106	90-110		MS	200	105	102	75-123	0.9	2.8	

FGL ID = 19950627 ND => Not Detected at or above DLR. DLR => Detection Limit for Reporting purposes. N/A => Not Applicable NOTE => See note indicated below.

### Notes:

105 Lab error determined to be the cause. The problem was identified and does not affect the samples.

FGL ENVIRONMENTAL, INC.

  
Darrell H. Nelson, President, Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504367

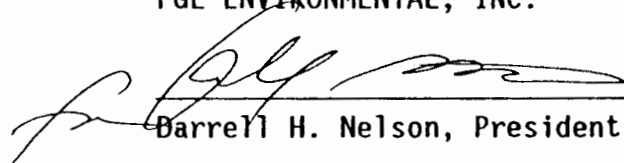
Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOC	02A	TOC	mg/L	LCS	50.0	98.0	75-125		MS	50.0	90.0	100	75-125	10.5	20.0	

FGL ID = 19950703 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

  
Darrell H. Nelson, President, Laboratory Director



# ENVIRONMENTAL

## Analytical Chemists

July 11, 1995

ORGANIC Quality Assurance Report for sample: 504367

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

Constituent	BATCH ID	EPA Method	Units	CALIBRATION QA/QC					METHOD QA/QC							
				Type	Conc.	% REC	AR	NOTE	Type	Conc.	% REC	% REC	AR	% DIF	MAV	NOTE
TOX	0	9020	Ug/L	CCV	100	108	75-125		MS	100	102	105	75-125	3.0	20	

FGL ID = 19950630 N/A => Not Applicable NOTE => See note indicated below.

FGL ENVIRONMENTAL, INC.

KAD/DHN:c1

Darrell H. Nelson, President, Laboratory Director



## **APPENDIX G**

### **ANALYTICAL REPORTS FOR BACKGROUND WATER QUALITY PARAMETERS AND GROUND WATER MONITORING PARAMETERS**



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504361-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/A/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 5, 1995

QA/QC ID# : 50436101-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	760
pH	150.1	units	---	7.4

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504361-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/B/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

### TOTAL ORGANIC CARBON


CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

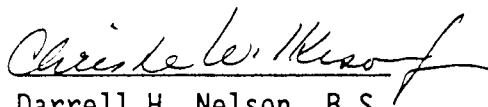
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504361-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/C/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

### TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	10	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504361-4

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/H/27

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 6, 1995

QA/QC ID# : 50436104-

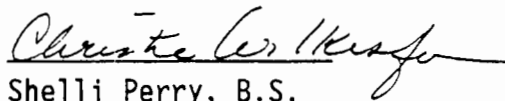
### Analytical Results

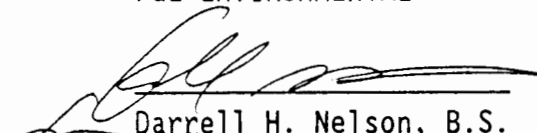
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	170
Sulfate	300.0	mg/L	2.0*	13

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
\* = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504361-5

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW1 Quarterly Sampling Area 317

Sample Description: MW1/O/27

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 29, 1995

QA/QC ID# : SP 95062900K A

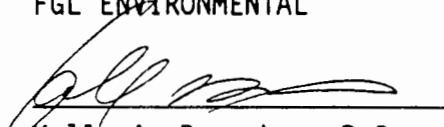
### EPA METHOD 601

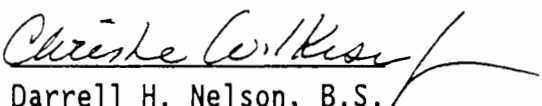
CONSTITUENT	SAMPLE	SAMPLE	LAB	BLANK
	DLR	RESULTS	DLR	RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

August 2, 1995

LAB No: SP 504361-6

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW1 Quarterly Sampling Area 317

Description: MW1/R/27

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : August 1, 1995

QA/QC ID# : 50436106-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	50	300
Manganese	200.8	ug/L	0.5	2.8	50
Sodium	200.7	mg/L	1	45	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C (2) HNO<sub>3</sub> pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504362-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317

Description: MW3/A/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 5, 1995

QA/QC ID# : 50436201-

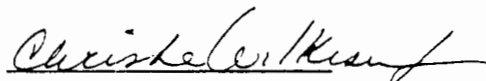
### Analytical Results


CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	620
pH	150.1	units	---	7.6

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1





# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504362-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/B/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

### TOTAL ORGANIC CARBON

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504362-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/C/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

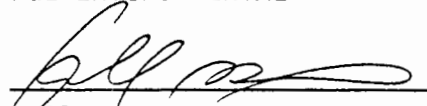
### TOTAL ORGANIC HALOGENS

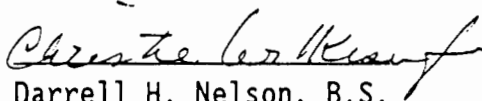
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	7	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504362-4

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317  
Description: MW3/H/27  
Sampled by: Abdun-Nur/Bricker  
Type of Sample: Monitoring Well

Sampled : June 27, 1995  
Received : June 27, 1995  
Completed : July 6, 1995  
QA/QC ID# : 50436204-

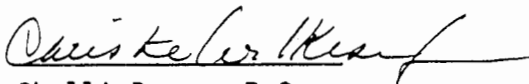
### Analytical Results

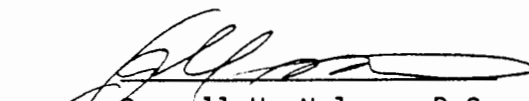
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	32
Sulfate	300.0	mg/L	2.0*	76

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
\* = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504362-5

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW3 Quarterly Sampling Area 317

Sample Description: MW3/O/27

Sampled by: Abdun-Nur/Bricker

Container: VOA

Preservatives:

Sampled: June 27, 1995

Received: June 27, 1995

Extracted: N/A

Analyzed: June 29, 1995

QA/QC ID#: SP 95062900K A

### EPA METHOD 601

CONSTITUENT	SAMPLE	SAMPLE	LAB	BLANK
	DLR	RESULTS	DLR	RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

August 2, 1995

LAB No: SP 504362-6

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW3 Quarterly Sampling Area 317

Description: MW3/R/27

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : August 1, 1995

QA/QC ID# : 50436206-

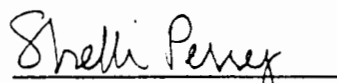
### Analytical Results

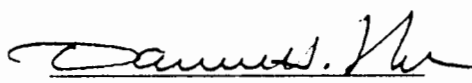
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	ND	300
Manganese	200.8	ug/L	0.5	0.6	50
Sodium	200.7	mg/L	1	53	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C (2) HNO3 pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504363-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/A/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 5, 1995

QA/QC ID# : 50436301-

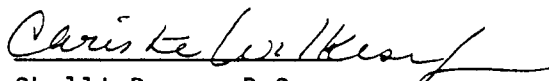
### Analytical Results

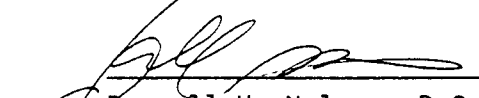
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	540
pH	150.1	units	---	7.7

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504363-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/B/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

### TOTAL ORGANIC CARBON

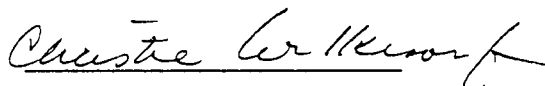
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504363-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/C/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

### TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	ND	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

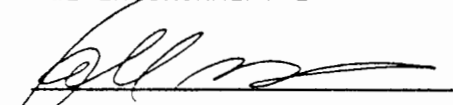
ug/L = Micrograms Per Liter (ppb)

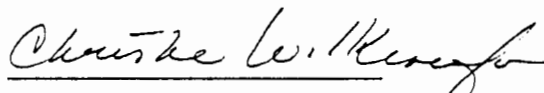
ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1





# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504363-4

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/H/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 6, 1995

QA/QC ID# : 50436304-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	47
Sulfate	300.0	mg/L	2.0*	35

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.

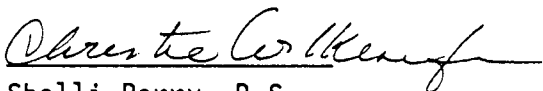
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

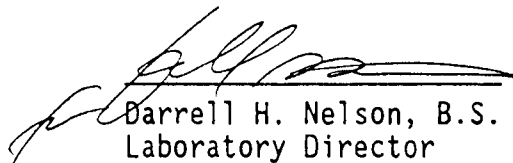
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL



Shelli Perry, B.S.



Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504363-5

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5 Quarterly Sampling Area 317

Sample Description: MW5/O/27

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 29, 1995

QA/QC ID# : SP 95062900K A

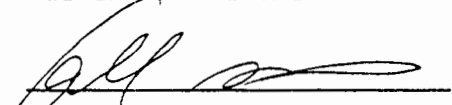
### EPA METHOD 601

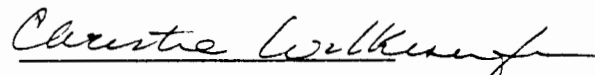
CONSTITUENT	SAMPLE DLR ug/L	SAMPLE RESULTS ug/L	LAB DLR ug/L	BLANK RESULTS ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

August 2, 1995

LAB No: SP 504363-6

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW5 Quarterly Sampling Area 317

Description: MW5/R/27

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : August 1, 1995

QA/QC ID# : 50436306-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	80	300
Manganese	200.8	ug/L	0.5	4.3	50
Sodium	200.7	mg/L	1	49	

DLR = Detection Limit for Reporting Purposes.

ND = Not Detected at or above the DLR.

ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C (2) HNO<sub>3</sub> pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504364-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/B/27/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

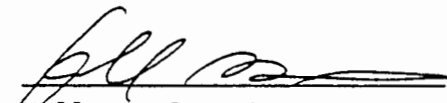
### TOTAL ORGANIC CARBON

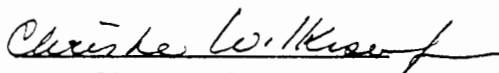
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504364-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/C/27/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

### TOTAL ORGANIC HALOGENS

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	9	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504364-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW5-1A Quarterly Sampling Area 317

Sample Description: MW5/O/27/1A

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 29, 1995

QA/QC ID# : SP 95062900K A

### EPA METHOD 601

CONSTITUENT	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
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KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504365-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/A/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 5, 1995

QA/QC ID# : 50436501-

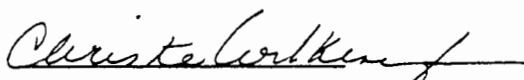
### Analytical Results

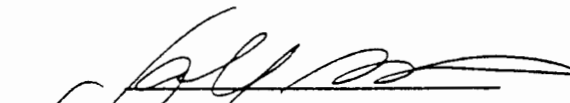
CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	570
pH	150.1	units	---	7.7

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Shelli Perry, B.S.

  
Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504365-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/B/27

Sampled by: Abdun-Nur/Bricker

Container: Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

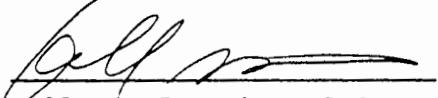
### TOTAL ORGANIC CARBON

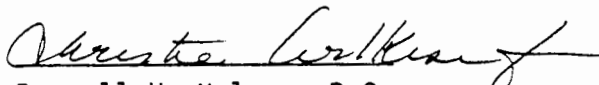
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1





# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504365-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/C/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

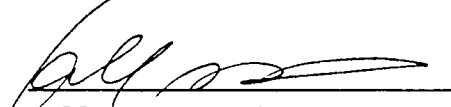
### TOTAL ORGANIC HALOGENS

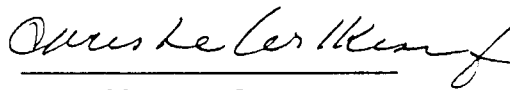
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	10	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504365-4

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/H/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 6, 1995

QA/QC ID# : 50436504-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	67
Sulfate	300.0	mg/L	2.0*	34

DLR = Detection Limit for Reporting Purposes.

ND = Not Detected at or above the DLR.

ug/L = Micrograms Per Liter (ppb)    mg/L = Milligrams Per Liter (ppm)    mg/kg = Milligrams Per Kilogram

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C    Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504365-5

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6 Quarterly Sampling Area 317

Sample Description: MW6/O/27

Sampled by: Abdun-Nur/Bricker

Container: VOA

Preservatives:

Sampled: June 27, 1995

Received: June 27, 1995

Extracted: N/A

Analyzed: June 29, 1995

QA/QC ID#: SP 95062900K A

### EPA METHOD 601

CONSTITUENT	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

ug/L = Micrograms Per Liter (ppb)

ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

KAD/DHN:c1

Darrell H. Nelson, B.S.  
Laboratory Director



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

August 2, 1995

LAB No: SP 504365-6

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW6 Quarterly Sampling Area 317

Description: MW6/R/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : August 1, 1995

QA/QC ID# : 50436506-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	140	300
Manganese	200.8	ug/L	0.5	3.0	50
Sodium	200.7	mg/L	1	45	

DLR = Detection Limit for Reporting Purposes.

ND = Not Detected at or above the DLR.

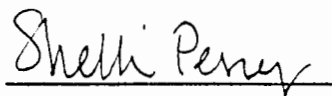
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

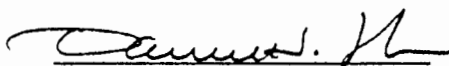
Preservatives: (1) Cool 4°C (2) HNO3 pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL



Shelli Perry, B.S.



Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504366-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/B/27/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

### TOTAL ORGANIC CARBON

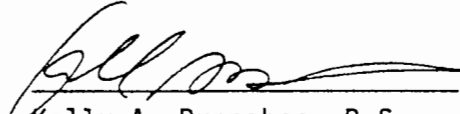
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

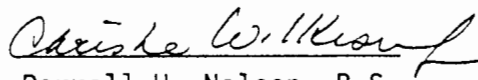
DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504366-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/C/27/1A

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

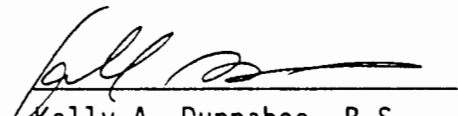
### TOTAL ORGANIC HALOGENS

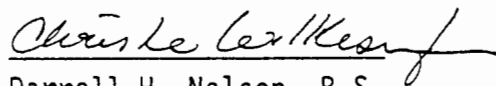
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	7	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 7, 1995

LAB No: SP 504366-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW6-1A Quarterly Sampling Area 317

Sample Description: MW6/O/27/1A

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 29, 1995

QA/QC ID# : SP 95062900K A

### EPA METHOD 601

CONSTITUENT	SAMPLE	SAMPLE	LAB	BLANK
	DLR	RESULTS	DLR	RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

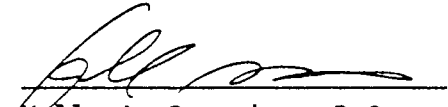
ug/L = Micrograms Per Liter (ppb)

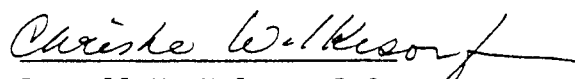
ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504367-1

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/A/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 5, 1995

QA/QC ID# : 50436701-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Conductivity	120.1	umhos/cm2	1	610
pH	150.1	units	---	7.8

DLR = Detection Limit for Reporting Purposes.

ND = Not Detected at or above the DLR.

ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1





# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504367-2

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/B/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : July 3, 1995

QA/QC ID# : SP 95070300A A

### TOTAL ORGANIC CARBON

CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOC	415.1	mg/L	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
mg/L = Milligrams Per Liter (ppm) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504367-3

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/C/27

Sampled by : Abdun-Nur/Bricker

Container : Amber Glass TFE-Cap

Preservatives: H2SO4 pH < 2

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 30, 1995

QA/QC ID# : SP 95063000A A

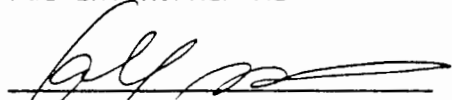
### TOTAL ORGANIC HALOGENS

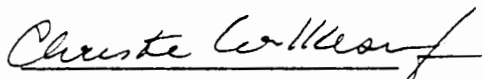
CONSTITUENT	EPA METHOD	UNITS	SAMPLE DLR	SAMPLE RESULTS	LAB DLR	BLANK RESULTS
TOX	9020	ug/L	5	10	5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)  
ug/L = Micrograms Per Liter (ppb) ND = Not Detected at or above the DLR.  
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504367-4

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/H/27

Sampled by: Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : July 6, 1995

QA/QC ID# : 50436704-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS
Chloride	300.0	mg/L	2.0*	68
Sulfate	300.0	mg/L	2.0*	41

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.  
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram  
\* = DLR adjusted because of dilutions, concentrations, or limited sample.  
Preservatives: (1) Cool 4°C Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Shelli Perry, B.S.

Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

July 11, 1995

LAB No: SP 504367-5

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Organic Analysis  
Matrix: Monitoring Well

Sampling Site: MW10 Quarterly Sampling Area 317

Sample Description: MW10/O/27

Sampled by : Abdun-Nur/Bricker

Container : VOA

Preservatives:

Sampled : June 27, 1995

Received : June 27, 1995

Extracted : N/A

Analyzed : June 29, 1995

QA/QC ID# : SP 95062900K A

### EPA METHOD 601

CONSTITUENT	SAMPLE	SAMPLE	LAB	BLANK
	DLR	RESULTS	DLR	RESULTS
	ug/L	ug/L	ug/L	ug/L
Trichloroethylene	0.5	ND	0.5	ND

DLR = Detection Limit for Reporting Purposes. MCL = Maximum Contaminant Level (--- indicates none determined.)

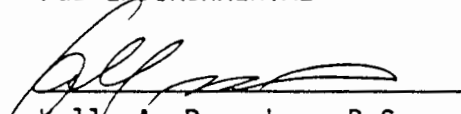
ug/L = Micrograms Per Liter (ppb)

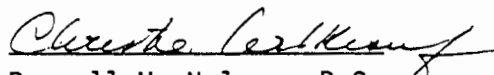
ND = Not Detected at or above the DLR.

\* = DLR adjusted because of dilutions, concentrations, or limited sample.

See attached report for Quality Assurance data. If you have any questions, please call.

FGL ENVIRONMENTAL

  
Kelly A. Dunnahoo, B.S.  
Organic Laboratory Manager

  
Darrell H. Nelson, B.S.  
Laboratory Director

KAD/DHN:c1



# ENVIRONMENTAL

## ANALYTICAL CHEMISTS

August 2, 1995

LAB No: SP 504367-6

Bermite Division of Whittaker  
22116 W. Soledad Canyon Road  
Saugus, CA 91350

RE: Inorganic Analysis

Sample Site: MW10 Quarterly Sampling Area 317

Description: MW10/R/27

Sampled by : Abdun-Nur/Bricker

Type of Sample: Monitoring Well

Sampled : June 27, 1995

Received : June 27, 1995

Completed : August 1, 1995

QA/QC ID# : 50436706-

### Analytical Results

CONSTITUENT	EPA METHOD	UNITS	DLR	RESULTS	MCL
Iron	200.7	ug/L	50	70	300
Manganese	200.8	ug/L	0.5	4.4	50
Sodium	200.7	mg/L	1	76	

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.

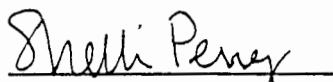
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram

♦ = DLR adjusted because of dilutions, concentrations, or limited sample.

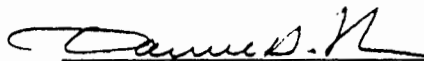
Preservatives: (1) Cool 4°C (2) HNO3 pH < 2 Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL



Shelli Perry, B.S.



Darrell H. Nelson, B.S.  
Laboratory Director

SP/DHN:c1

**APPENDIX H**  
**STATISTICAL ANALYSES**

TABLE H-1

## TWENTY-SEVENTH QUARTER SAMPLING EVENT

Parameter	Units	Tolerance Limit	Well No.		
			MW-5	MW-6	MW-10
Chloride	mg/l	186	47	67	68
pH		7.07/7.97	7.7	7.7	7.8
Specific Conductance	$\mu\text{mhos}/\text{cm}^2$	774.3	540	570	610
Sulfate	mg/l	104	35	34	41
Iron	$\mu\text{g}/\text{l}$	235	80	140	70
Manganese	$\mu\text{g}/\text{l}$	25.7	4.3	3.0	4.4
Sodium	mg/l	59.1	49	45	76
TCE	$\mu\text{g}/\text{l}$	0.5 <sup>a</sup>	<0.5	<0.5	<0.5
TOC	mg/l	3.30	<0.5	<0.5	<0.5
TOX	$\mu\text{g}/\text{l}$	59.9	<5	10	10

Note: All tolerance limits are upper limits except pH which has both upper and lower limits.

<sup>a</sup>Tolerance limit set at detection limit.

TABLE H-2

CONCENTRATIONS OF GROUND WATER MONITORING PARAMETERS  
IN SAMPLES FROM BACKGROUND MONITORING WELL MW-1

Date	Quarter	pH <sup>a</sup>	Conductance* ( $\mu$ mhos/cm <sup>2</sup> )	TOC* (mg/l)	TOX* ( $\mu$ g/l)	SO <sub>4</sub> <sup>2-</sup> (mg/l)	Cl <sup>-</sup> (mg/l)	Fe ( $\mu$ g/l)	Mn ( $\mu$ g/l)	Na (mg/l)	TCE ( $\mu$ g/l)
10/04/88 <sup>b</sup>	1	7.5	598	<3	<100	11					<5
01/25/89	2	7.48	572	2.4 <sup>c</sup>	<100	22					
04/17/89	3	7.2		<3	<100	11					
07/27/89	4	7.48	500	2.4 <sup>c</sup>	<100	13					
10/31/89	5	7.6	524	<3	<100	10	83				
01/25/90	6	7.4	570	<3	<100	16	85				
04/17/90	7	7.55	504	<4	<20	11	88				
07/17/90	8	8.28	530	<4	<20	10	82				
10/18/90	9	7.4	544	<1	75 <sup>c</sup>	23	98				
01/29/91	10	7.5	573	1.4	<5	8	96				
04/23/91	11	7.68	559	1.8	<5	10	100				
07/19/91	12	7.33	575	1.2	<5	11	97				
10/08/91 <sup>d</sup>	--	--	--	--	--	--	--				
03/13/92	14	7.5	639	0.4 <sup>c</sup>	<5	13	131				
04/21/92	15	7.5	643	<0.5	<5	9	130				
07/29/92	16	7.55	660	<0.5	6.9	11	133				
10/20/92	17	7.5	676	<0.5	<5	10	138				
01/27/93	18	7.68	707	<0.5	<5	6	137				
06/09/93 <sup>a</sup>	19	7.5	715	<0.5	<5	9	134	250	<30	52	
07/14/93	20	--	--	--	--	--	--	220	<30	46	
08/11/93	20	--	--	--	--	--	--	60	<30	54	
09/22/93	20	7.5	720	<0.5	9	13	161	100	<30	52	
12/08/93	21	7.4	726	<0.5	<5	10	151	50	<30	57	
03/10/94	22	7.5	730	>0.5	<5	10	150	200	<30	48	<0.5
06/22/94	23	7.5	740	<0.5	<5	15	150	150	<30	54	<0.5
09/14/94	24	7.4	750	<0.5	8	9	160	60	2.5	57	<0.5
12/14/94	25	7.5	770	<0.5	<5	10	150	80	4	51	<0.5
03/29/95	26	7.5	770	<0.5	<5	12	160	60	1.6	49	<0.5
06/27/95	27	7.4	760	<0.5	10	13	170	50	2.8	45	<0.5

<sup>a</sup>Each value is the average result from four replicate samples.

<sup>b</sup>Samples from 01/27/88, 07/29/88, 08/15/88, and 10/04/88 reported TCE at <5  $\mu$ g/l.

<sup>c</sup>The replicates included a portion with results below the detection limit. The average was calculated after assigning a value of one-half the detection limit for the samples below the detection limit.

<sup>d</sup>Not sampled because water elevation dropped below elevation of sampling pump intake.



TABLE H-3

CONCENTRATIONS OF GROUND WATER MONITORING PARAMETERS  
IN SAMPLES FROM BACKGROUND MONITORING WELL MW-3

Date	Quarter	pH <sup>a</sup>	Conductance <sup>a</sup> ( $\mu$ mhos/cm <sup>2</sup> )	TOC <sup>a</sup> (mg/l)	TOX <sup>a</sup> ( $\mu$ g/l)	SO <sub>4</sub> <sup>2-</sup> (mg/l)	Cl <sup>-</sup> (mg/l)	Fe ( $\mu$ g/l)	Mn ( $\mu$ g/l)	Na (mg/l)	TCE ( $\mu$ g/l)
10/04/88 <sup>b</sup>	1	7.48	699	<3	361.25	73					<5
01/25/89	2	7.73	664	<3	<100	74					
04/17/89	3	7.3		<3	<100	9					
07/27/89	4	7.5	661	<3	<100	65					
10/31/89	5	7.53	617	<3	<100	68	35				
01/25/90	6	7.18	641	7.1 <sup>c</sup>	<100	74	36				
04/17/90	7	7.33	590	<4	<20	60	46				
07/17/90	8	8.23	589	<4	<20	67	39				
10/18/90	9	7.63	642	0.7 <sup>c</sup>	<100	15	34				
01/29/91	10	7.28	656	2.2	<5	80	54				
04/23/91	11	7.55	629	2.0	<5	77	34				
07/19/91	12	7.23	633	1.3	<5	85	45				
10/09/91	13	7.65	642	<0.5	<5	34	37				
03/13/92	14	7.45	648	0.6	3.3 <sup>c</sup>	85	33				
04/21/92	15	7.5	644	<0.5	<5	81	37				
07/29/92	16	7.55	643	0.34 <sup>c</sup>	<5	74	33				
10/20/92	17	7.55	641	<0.5	<5	67	34				
01/27/93	18	7.6	640	<0.5	<5	69	30				
06/09/93 <sup>d</sup>	19	7.6	627	<0.5	<5	70	28	50	<30	48	
09/14/94	24	7.4	750	<0.5	8	9	160	60	2.5	57	<0.5
07/14/93	20	--	--	--	--	--	--	<50	<30	44	
08/11/93	20	--	--	--	--	--	--	<50	<30	50	
09/22/93	20	7.4	630	<0.5	<5	87	37	<50	<30	50	
12/08/93	21	7.4	627	<0.5	<5	72	35	<50	<30	54	
03/10/94	22	7.4	620	<0.5	<5	74	31	<50	<30	47	<0.5
06/22/94	23	7.6	630	<0.5	8 <sup>e</sup>	71	29	<50	<30	53	<0.5
09/14/94	24	7.5	630	<0.5	<5	80	31	<50	0.7	52	<0.5
12/14/94	25	7.5	630	<0.5	<5	69	28	<50	<1	48	<0.5
03/29/95	26	7.7	620	<0.5	7	71	28	<50	0.8	49	<0.5
06/27/95	27	7.6	620	<0.5	7	76	32	<50	0.6	53	<0.5

<sup>a</sup>Each value is the average result from four replicate samples.

<sup>b</sup>Samples from 02/17/88, 05/27/88, 07/19/88, 08/15/88, and 10/04/88 reported TCE at <5  $\mu$ g/l.

<sup>c</sup>The replicates included a portion with results below the detection limit. The average was calculated after assigning a value of one-half the detection limit for the samples below the detection limit.

<sup>d</sup>Single sample. Replicates no longer taken.

<sup>e</sup>Duplicate sample analytical result also 8  $\mu$ g/l.

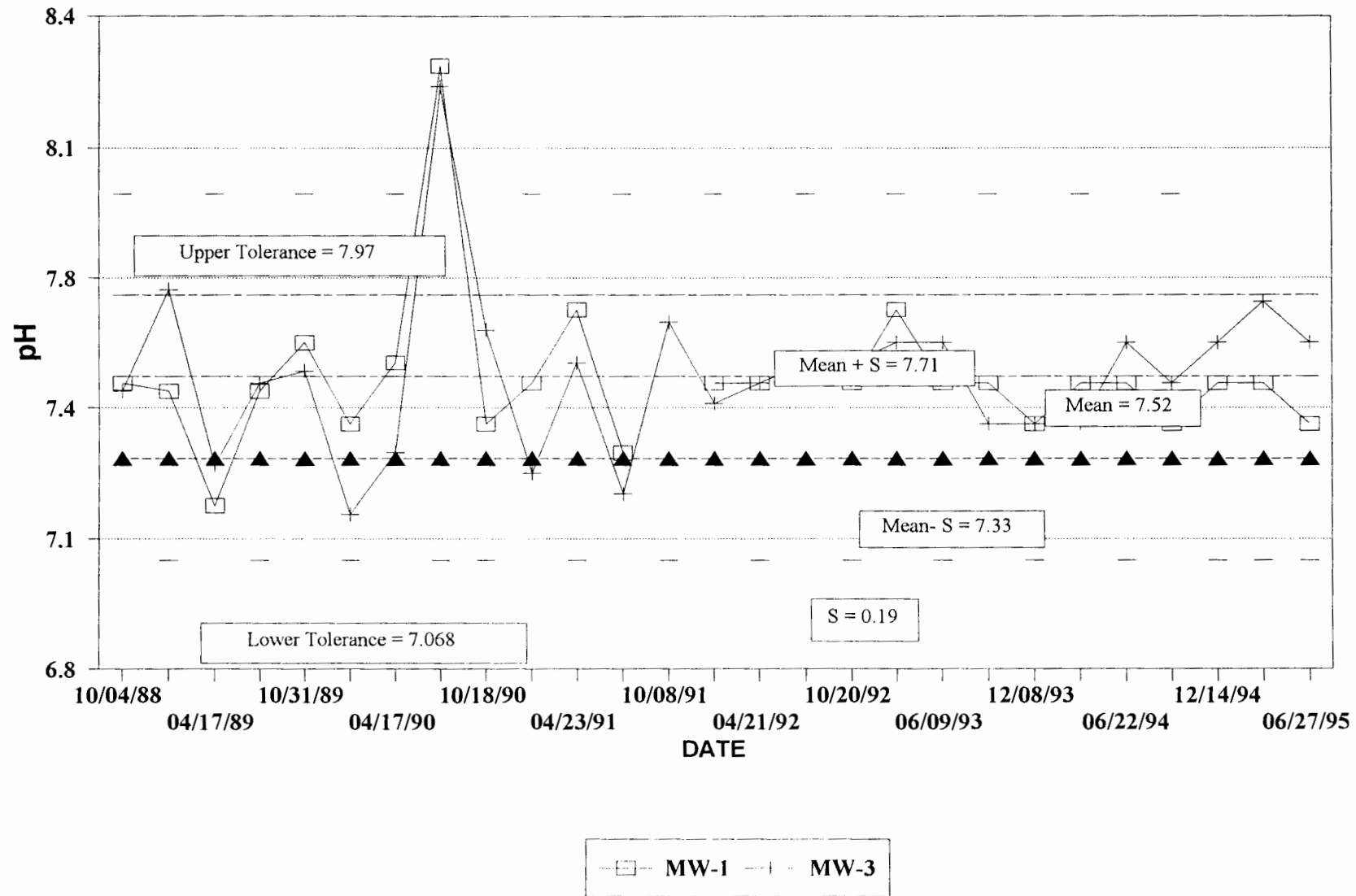
TABLE H-4  
TOLERANCE LIMIT CALCULATIONS

	pH	Conductance	TOC	TOX	Chloride	Sulfate	Iron	Manganese	Sodium
$\Sigma x$	398.4	32,568	52.34	841.70	3,590	2,133	1,580	224	1,114
n (number of samples)	53	51	53	52	45	53	22	22	22
$\bar{x}$ (mean)	7.52	639	0.99	16.2	79.8	40.2	71.8	10.2	50.6
s (sample standard deviation)	0.19	65.7	1.13	21.3	50.8	31.3	69.3	6.6	3.62
k (from tables)	2.364	2.0592	2.0476	2.0534	2.092	2.0476	2.350	2.350	2.350
Upper Tolerance Limit <sup>a</sup>	7.97	774.3	3.30	59.9	186	104	235	25.7	59.1
Lower Tolerance Limit <sup>b</sup>	7.068								

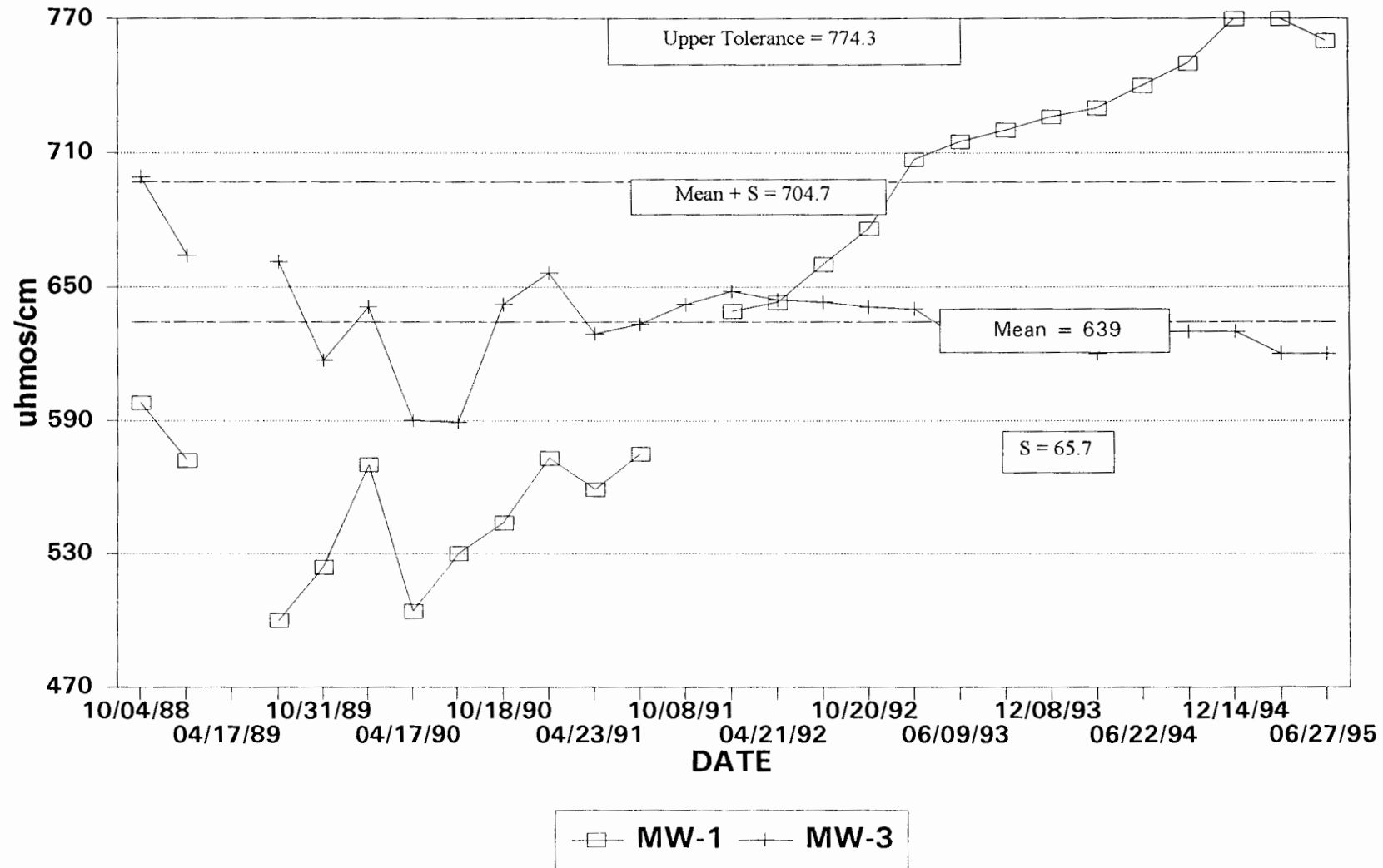
<sup>a</sup>Upper Tolerance Limit =  $\bar{x} + ks$ .

<sup>b</sup>Lower Tolerance Limit =  $\bar{x} - ks$ .

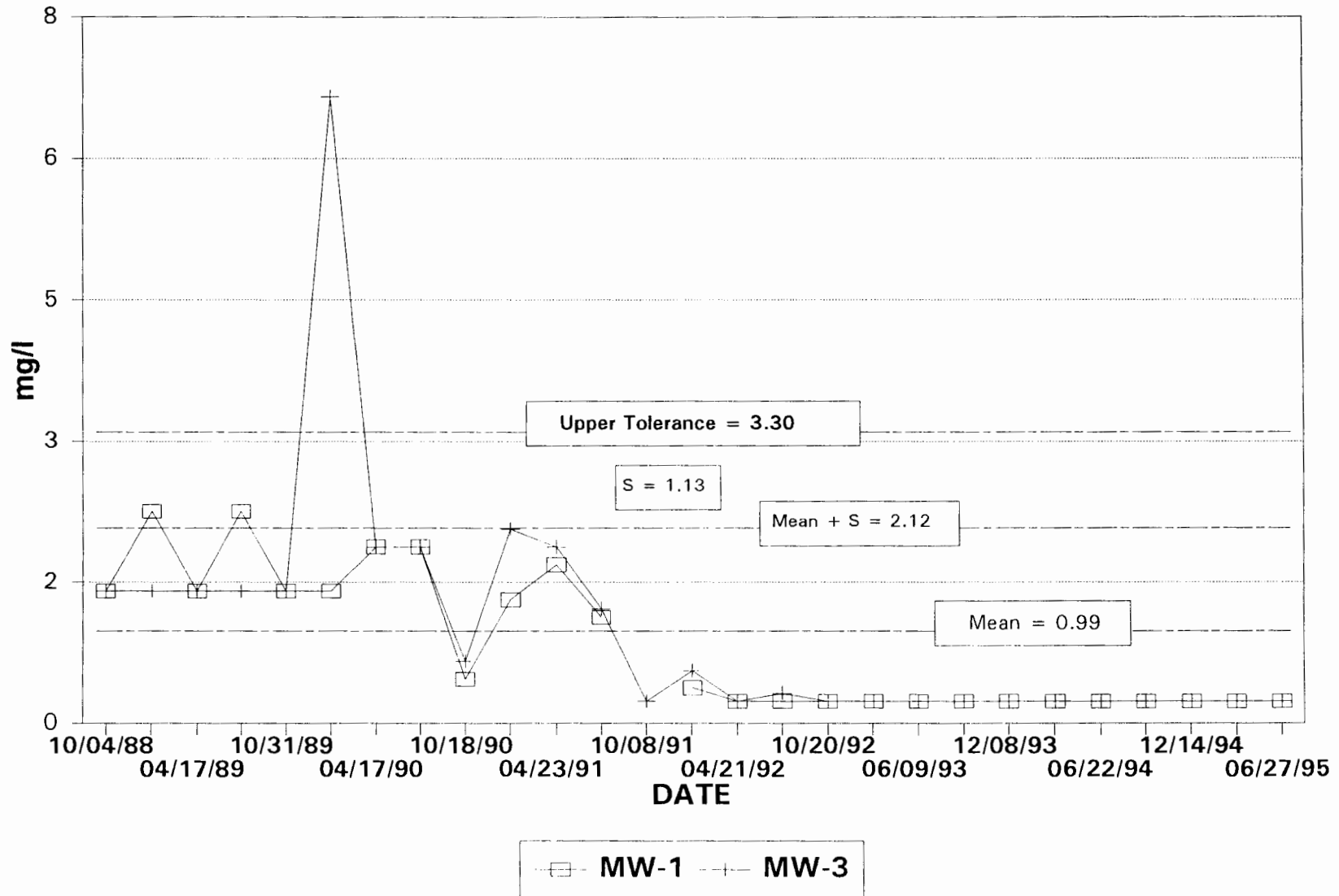
# pH MONITORING WELLS MW-1 AND MW-3



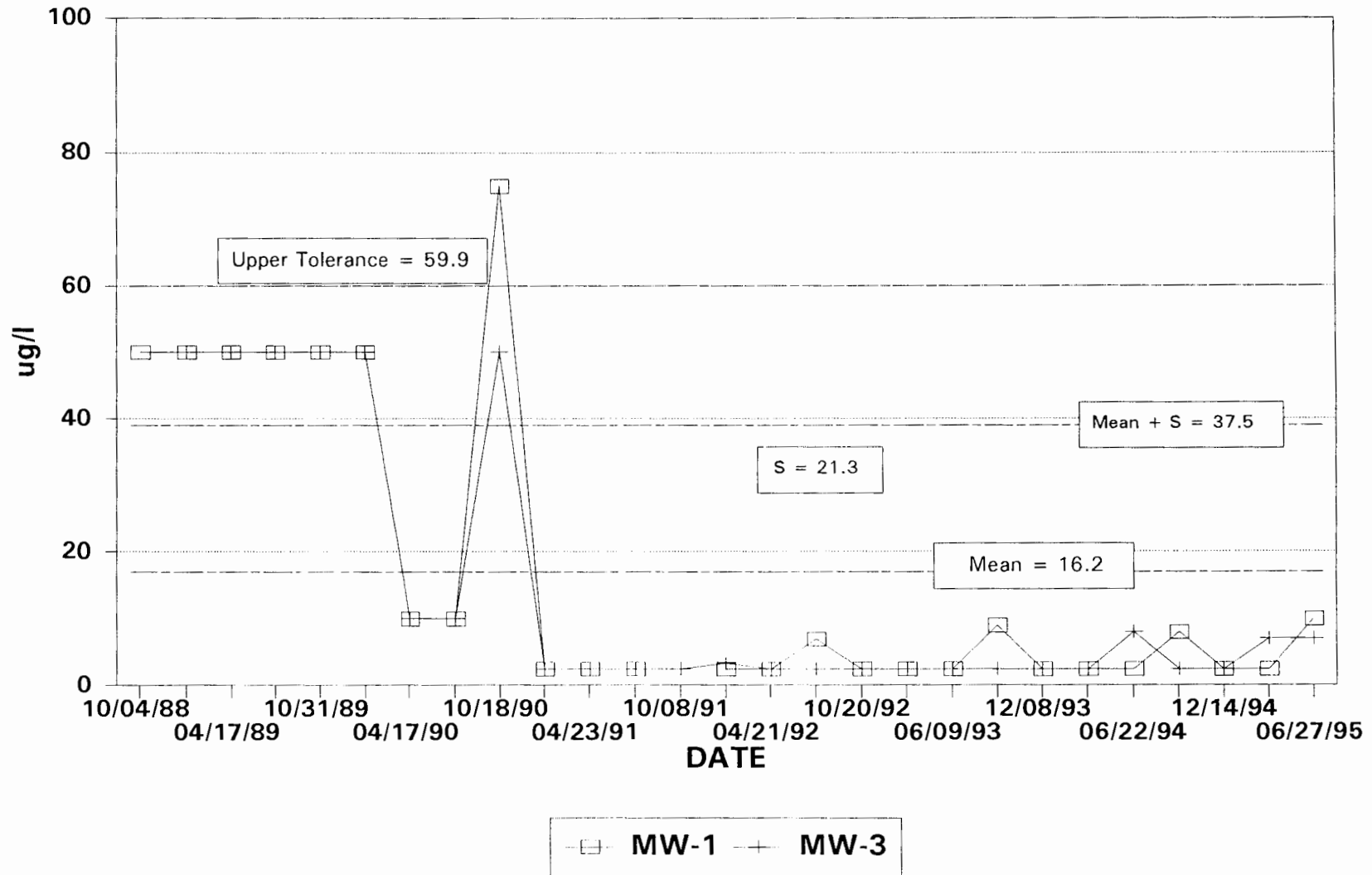
# SPECIFIC CONDUCTANCE MONITORING WELLS MW-1 AND MW-3



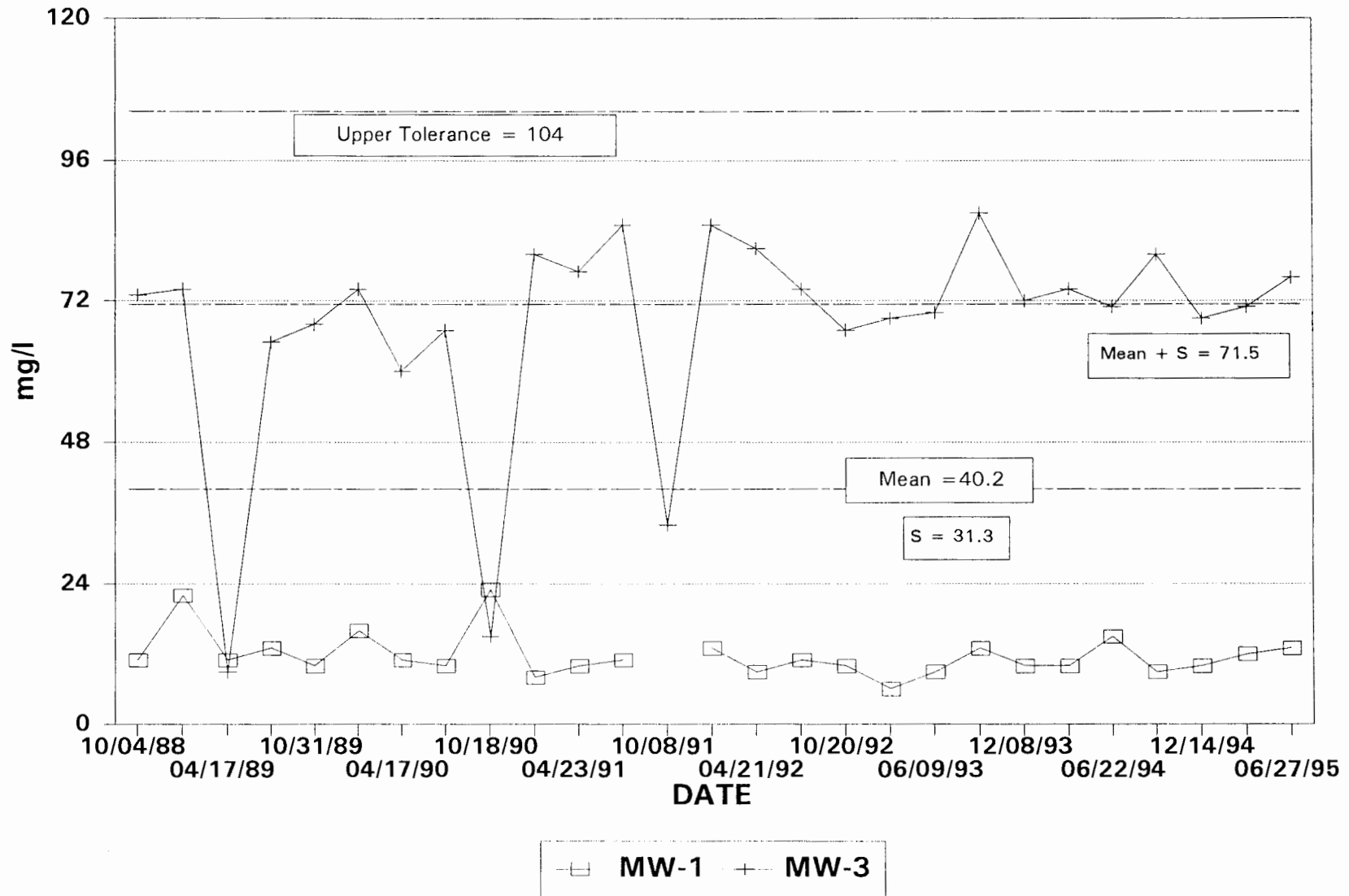
# TOTAL ORGANIC CARBON MONITORING WELLS MW-1 AND MW-3



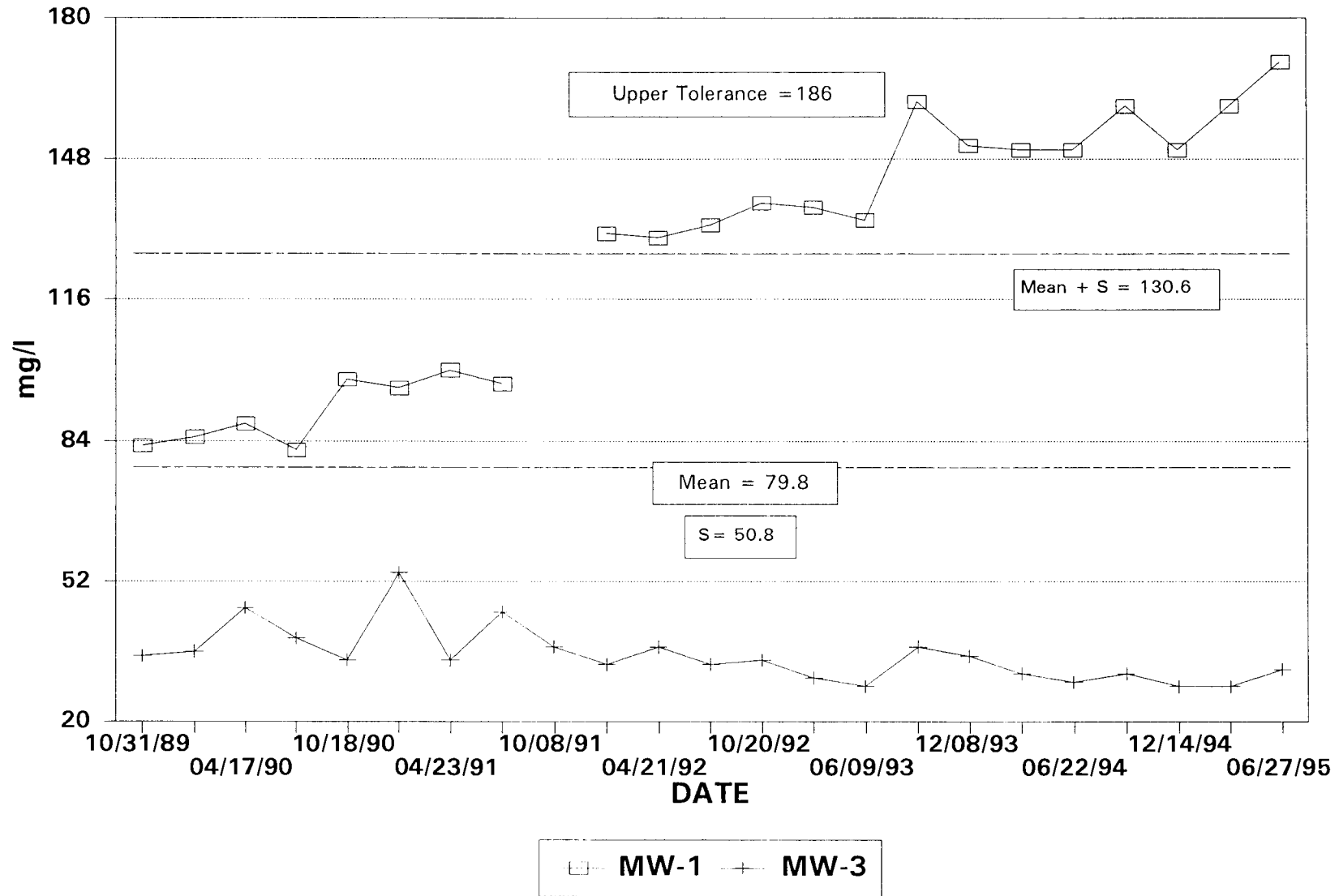
# TOTAL ORGANIC HALOGENS MONITORING WELLS MW-1 AND MW-3



# SULFATE MONITORING WELLS MW-1 AND MW-3

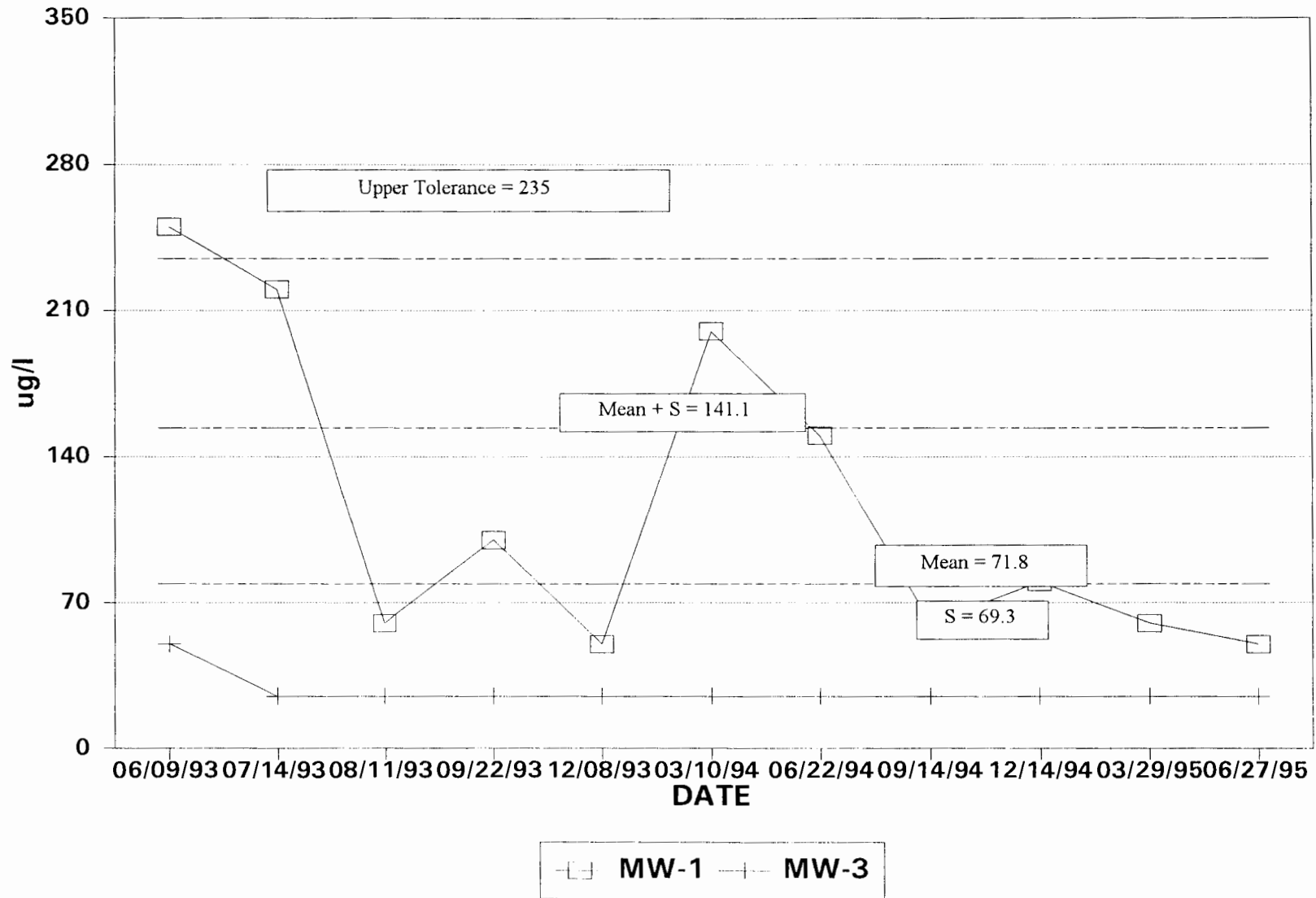


# CHLORIDE MONITORING WELLS MW-1 AND MW-3

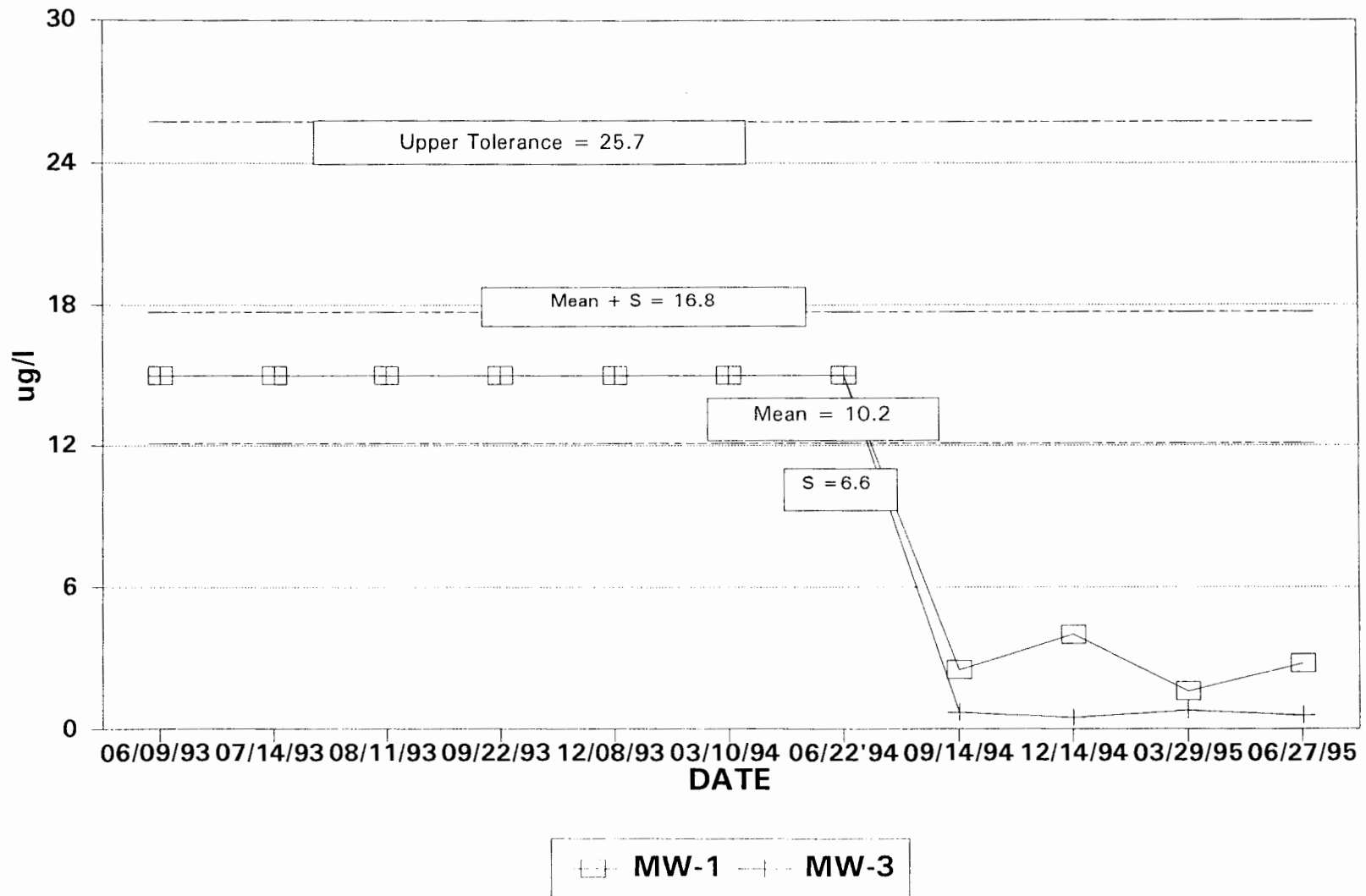




# IRON MONITORING WELLS MW-1 AND MW-3



# MANGANESE MONITORING WELLS MW-1 AND MW-3



# SODIUM MONITORING WELLS MW-1 AND MW-3

